File Copy


```
=> fil reg
FILE 'REGISTRY' ENTERED AT 11:34:48 ON 07 FEB 2005
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Property values tagged with IC are from the ZIC/VINITI data file
provided by InfoChem.

STRUCTURE FILE UPDATES:    6 FEB 2005  HIGHEST RN 826990-02-7
DICTIONARY FILE UPDATES:   6 FEB 2005  HIGHEST RN 826990-02-7

TSCA INFORMATION NOW CURRENT THROUGH MAY 21, 2004

  Please note that search-term pricing does apply when
  conducting SmartSELECT searches.

Crossover limits have been increased.  See HELP CROSSOVER for details.

Experimental and calculated property data are now available. For more
information enter HELP PROP at an arrow prompt in the file or refer
to the file summary sheet on the web at:
http://www.cas.org/ONLINE/DBSS/registryss.html

=> d sta que l16
L1                STR
```

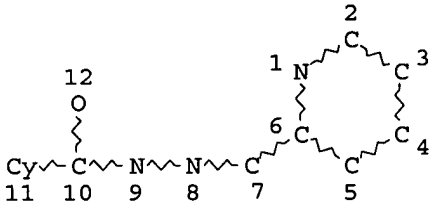


```
NODE ATTRIBUTES:
DEFAULT MLEVEL IS ATOM
DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:
RING(S) ARE ISOLATED OR EMBEDDED
NUMBER OF NODES IS  12

STEREO ATTRIBUTES: NONE
L3          1614 SEA FILE=REGISTRY SSS FUL L1
L4                STR
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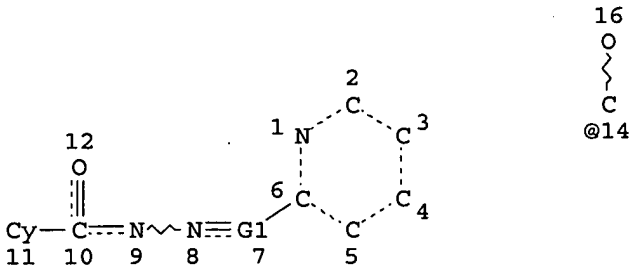
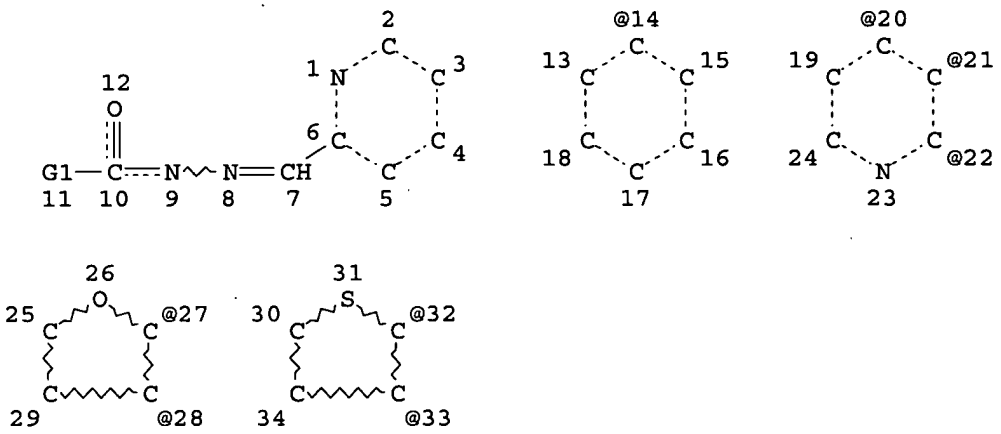



```
VAR G1=CH/14
NODE ATTRIBUTES:
CONNECT IS E1  RC AT  16
DEFAULT MLEVEL IS ATOM
GGCAT   IS MCY  AT  11
```

DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:
RSPEC 6
NUMBER OF NODES IS 14

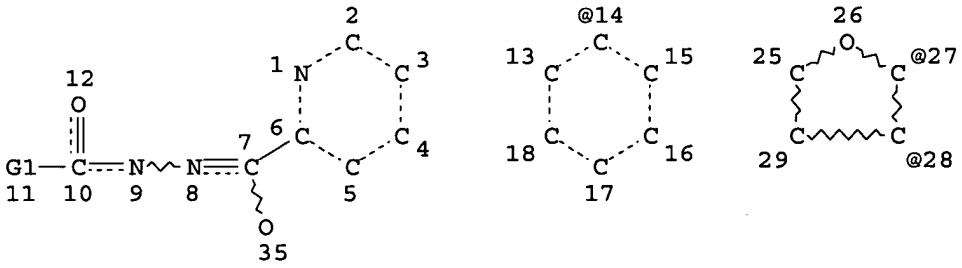
STEREO ATTRIBUTES: NONE
L6 793 SEA FILE=REGISTRY SUB=L3 SSS FUL L4
L7 STR



VAR G1=14/20/21/22/32/33/27/28
NODE ATTRIBUTES:
DEFAULT MLEVEL IS ATOM
DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:
RSPEC 6 13 19 25 30
NUMBER OF NODES IS 34

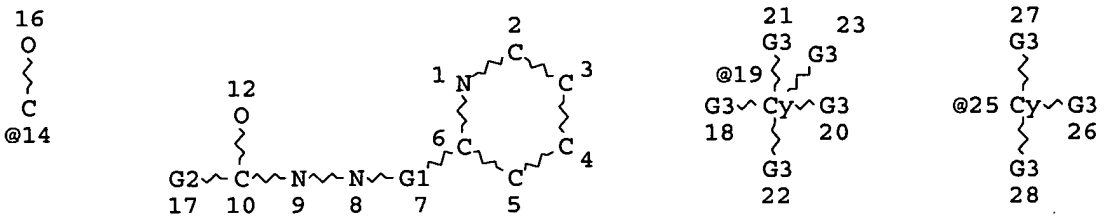
STEREO ATTRIBUTES: NONE
L9 496 SEA FILE=REGISTRY SUB=L6 SSS FUL L7
L10 STR



VAR G1=14/27/28
NODE ATTRIBUTES:
CONNECT IS E1 RC AT 35
DEFAULT MLEVEL IS ATOM
DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:
RSPEC 6 13 25
NUMBER OF NODES IS 24

STEREO ATTRIBUTES: NONE
L12 89 SEA FILE=REGISTRY SUB=L6 SSS FUL L10
L13 STR



```
VAR G1=C/14
VAR G2=19/25
VAR G3=H/AK/X/NO2/N/O
NODE ATTRIBUTES:
DEFAULT MLEVEL IS ATOM
GGCAT   IS MCY  AT  19
GGCAT   IS MCY  AT  25
DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:
RSPEC   6
NUMBER OF NODES IS  24

STEREO ATTRIBUTES: NONE
L14          585 SEA FILE=REGISTRY ABB=ON  PLU=ON  (L9 OR L12)
L16          110 SEA FILE=REGISTRY SUB=L14 CSS FUL L13

100.0% PROCESSED    585 ITERATIONS                          110 ANSWERS
SEARCH TIME: 00.00.01


=> d his

     (FILE 'HOME' ENTERED AT 11:11:27 ON 07 FEB 2005)
               SET COST OFF

     FILE 'REGISTRY' ENTERED AT 11:11:39 ON 07 FEB 2005
L1                STR
L2              46 S L1
L3            1614 S L1 FUL
                  SAV L3 ZINNA069/A
L4                STR L1
L5              33 S L4 SAM SUB=L3
L6             793 S L4 FUL SUB=L3
                  SAV L6 ZINNA069A/A
L7                STR L4
L8              25 S L7 SAM SUB=L6
L9             496 S L7 FUL SUB=L6
                  SAV L9 ZINNA069B/A
L10               STR L7
L11             6 S L10 SAM SUB=L6
L12            89 S L10 FUL SUB=L6
                  SAV L12 ZINNA069C/A
L13               STR L1
L14            585 S L9,L12
L15              5 S L13 CSS SAM SUB=L14
L16            110 S L13 CSS FUL SUB=L14
                  SAV L16 ZINNA069D/A

     FILE 'HCAPLUS' ENTERED AT 11:23:50 ON 07 FEB 2005
L17              1 S WO2000-AU1050/AP,PRN
L18              1 S AU99-2624/AP,PRN
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                E RICHARDSON D/AU
L19          473 S E3-E27
                E RICHARDSON DES/AU
L20          100 S E3-E8
                E BERNDHART P/AU
                E BERNHARDT P/AU
L21          183 S E3,E5,E7,E10,E11
                E BECKER E/AU
L22          142 S E3,E17,E18
                E BECKER ERIKA/AU
L23            6 S E3-E5
                E BECKER ERICA/AU
L24          107 S L16
L25           12 S L24 AND L17-L23
L26            1 S L17,L18 AND L25
                SEL RN

     FILE 'REGISTRY' ENTERED AT 11:27:37 ON 07 FEB 2005
L27           17 S E1-E17
L28           12 S L27 AND L3
L29            5 S L27 NOT L28
L30            4 S L29 AND NC5/ES

     FILE 'HCAPLUS' ENTERED AT 11:29:18 ON 07 FEB 2005
L31            3 S L28
L32            2 S L31 AND L25
L33            3 S L31,L32,L26
L34            3 S L25 AND (PY<=1999 OR PRY<=1999 OR AY<=1999)
L35            4 S L33,L34
L36           69 S L24 AND (PY<=1999 OR PRY<=1999 OR AY<=1999)
L37           66 S L36 NOT L35
                SEL HIT RN

     FILE 'REGISTRY' ENTERED AT 11:30:40 ON 07 FEB 2005
L38           32 S E18-E49

     FILE 'HCAPLUS' ENTERED AT 11:31:06 ON 07 FEB 2005
L39           21 S L16 (L) (BAC OR THU OR BSU OR PKT OR PAC OR DMA)/RL
L40           24 S L16 (L) BIOL/RL
L41            0 S L16 (L) BUU/RL
L42           29 S L16 AND (PHARMACEUT? OR PHARMACOL?)/SC,SX
L43           17 S L37 AND L39-L42
                E CHELATING AGENTS/CT
L44        12645 S E3-E7
                E E3+ALL
L45         1582 S E4-E6
L46        12819 S E3+NT
L47         4411 S E17+OLD,NT
L48            2 S L37 AND L44-L47
L49           18 S L43,L48
L50            9 S L37 AND P/DT
L51           21 S L49,L50
L52           25 S L35,L51

     FILE 'REGISTRY' ENTERED AT 11:34:48 ON 07 FEB 2005


=> fil hcaplus
FILE 'HCAPLUS' ENTERED AT 11:35:28 ON 07 FEB 2005
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FILE COVERS 1907 - 7 Feb 2005 VOL 142 ISS 7
FILE LAST UPDATED: 6 Feb 2005 (20050206/ED)

This file contains CAS Registry Numbers for easy and accurate substance identification.

=> d all hitstr tot l52

L52 ANSWER 1 OF 25 HCAPLUS COPYRIGHT 2005 ACS on STN
AN 2003:222333 HCAPLUS
DN 138:255233
ED Entered STN: 21 Mar 2003
TI Heteropolycyclic compounds, particularly pyridyl- and phenyl-substituted 1,2,4-oxadiazoles and analogs, and their use as metabotropic glutamate receptor antagonists for inhibiting neuronal damage
IN Van Wagenen, Bradford; Stormann, Thomas M.; Moe, Scott T.; Sheehan, Susan M.; McLeod, Donald A.; Smith, Daryl L.; Isaac, Methvin Benjamin; Slassi, Abdelmalik
PA NPS Pharmaceuticals, Inc., USA
SO U.S. Pat. Appl. Publ., 151 pp., Cont.-in-part of Appl. No. PCT/US00/22618.
CODEN: USXXCO
DT **Patent**
LA English
IC ICM A61K031-444
ICS A61K031-4439; C07D041-14; C07D413-02
NCL 514333000; 514340000; 514341000; 546256000; 546269400; 546272400
CC 28-10 (Heterocyclic Compounds (More Than One Hetero Atom))
Section cross-reference(s): **1**
FAN.CNT 3

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 2003055085	A1	20030320	US 2002-76618	20020219 <--
	US 6660753	B2	20031209		
	WO 2001012627	A1	20010222	WO 2000-US22618	20000818 <--
	W: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
	RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
PRAI	US 1999-149464P	P	19990819 <--		
	WO 2000-US22618	A2	20000818		
	US 2001-269847P	P	20010221		

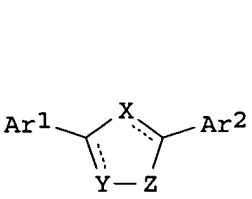
CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
US 2003055085	ICM	A61K031-444
	ICS	A61K031-4439; C07D041-14; C07D413-02

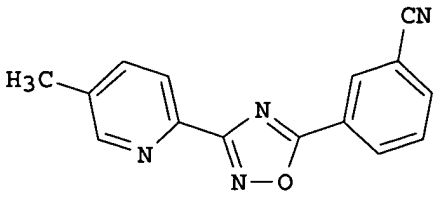
NCL 514333000; 514340000; 514341000; 546256000; 546269400; 546272400

OS MARPAT 138:255233

GI



I



II

AB The title compds. [I; X, Y, Z = N, O, S, CR1 and at least one of X, Y, and Z = heteroatom; R1 = H, alkyl, CF3, etc.; Ar1, Ar2 = (un)substituted (hetero)aryl] that act as antagonists at metabotropic glutamate receptors, and that are useful for treating neurol. diseases and disorders, were prepared The compds. I exhibit a high degree of potency and selectivity for individual metabotropic glutamate receptor subtypes, notably mGluR5. In particular, medical conditions associated with metabotropic glutamate receptors and therefore targeted by the invention compds. include stroke, head trauma, anoxic injury, ischemic injury, hypoglycemia, epilepsy, pain, migraine headaches, Parkinson's disease, senile dementia, Huntington's Chorea, and Alzheimer's disease. Several hundred specific examples are individually prepared and/or claimed. A variety of intermediates were also prepared For instance, 5-methylpyrid-2-ylamidoxime was prepared from 2-bromo-5-methylpyridine by Zn- and Pd-complex-mediated cyanation (56%) and reaction of the resulting nitrile with NH2OH.HCl (60%). Cyclization of the amidoxime with 3-cyanobenzoyl chloride (86%) gave invention compound II. In a bioassay for mGluR5 antagonism in primary astrocyte cultures from rats, the invention compds. I had IC50 values in the range of 11 to 9140 nM.

ST oxadiazole triazole oxazole furan prepn mGluR5 antagonist; heteropolycyclic phenylpyridyloxadiazole prepn metabotropic glutamate receptor antagonist neuroprotectant

IT Nervous system, disease
(Huntington's chorea, treatment of; preparation of pyridyl- and phenyl-substituted oxadiazoles and analogs as metabotropic glutamate receptor antagonists for inhibiting neuronal damage)

IT Brain, disease
(ischemia, treatment of; preparation of pyridyl- and phenyl-substituted oxadiazoles and analogs as metabotropic glutamate receptor antagonists for inhibiting neuronal damage)

IT Glutamate receptors
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(metabotropic, mGluR5; preparation of pyridyl- and phenyl-substituted oxadiazoles and analogs as metabotropic glutamate receptor antagonists for inhibiting neuronal damage)

IT Headache
(migraine, treatment of; preparation of pyridyl- and phenyl-substituted oxadiazoles and analogs as metabotropic glutamate receptor antagonists for inhibiting neuronal damage)

IT Cytoprotective agents
(neuroprotective; preparation of pyridyl- and phenyl-substituted oxadiazoles and analogs as metabotropic glutamate receptor antagonists for inhibiting neuronal damage)

IT Analgesics
Anti-Alzheimer's agents
Anti-ischemic agents
Anticonvulsants

Antimigraine agents
Antiparkinsonian agents
Anxiolytics
Glutamate antagonists
Human
Nervous system agents
Psychotropics
(preparation of pyridyl- and phenyl-substituted oxadiazoles and analogs as metabotropic glutamate receptor antagonists for inhibiting neuronal damage)

IT Mental disorder
(senile psychosis, treatment of; preparation of pyridyl- and phenyl-substituted oxadiazoles and analogs as metabotropic glutamate receptor antagonists for inhibiting neuronal damage)

IT Brain, disease
(stroke, treatment of; preparation of pyridyl- and phenyl-substituted oxadiazoles and analogs as metabotropic glutamate receptor antagonists for inhibiting neuronal damage)

IT Head, disease
(trauma, treatment of; preparation of pyridyl- and phenyl-substituted oxadiazoles and analogs as metabotropic glutamate receptor antagonists for inhibiting neuronal damage)

IT Alzheimer's disease
Anxiety
Epilepsy
Hypoglycemia
Hypoxia, animal
Mental disorder
Nervous system, disease
Pain
Parkinson's disease
(treatment of; preparation of pyridyl- and phenyl-substituted oxadiazoles and analogs as metabotropic glutamate receptor antagonists for inhibiting neuronal damage)

IT 453565-92-9P, 3-[Imino(methoxy)methyl]-5-trifluoromethoxybenzoic acid
RL: BYP (Byproduct); RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent)
(byproduct and precursor; preparation of pyridyl- and phenyl-substituted oxadiazoles and analogs as metabotropic glutamate receptor antagonists for inhibiting neuronal damage)

IT 453568-64-4P, 5-Bromo-1,3-bis(1-imidazolyl)benzene
RL: BYP (Byproduct); PREP (Preparation)
(byproduct; preparation of pyridyl- and phenyl-substituted oxadiazoles and analogs as metabotropic glutamate receptor antagonists for inhibiting neuronal damage)

IT 327056-22-4P, 3-(2-Pyridyl)-5-(3-fluoro-5-cyanophenyl)-1,2,4-oxadiazole
327056-26-8P, 3-(5-Fluoropyrid-2-yl)-5-(3-cyano-5-fluorophenyl)-1,2,4-oxadiazole 327056-37-1P, 3-(2-Pyridyl)-5-(2-bromo-5-methoxyphenyl)-1,2,4-oxadiazole 327056-46-2P, 2-(3-Bromophenyl)-4-(pyridin-2-yl)-1,3-oxazole
453566-27-3P, 3-(5-Cyano-2-pyridyl)-5-(3-bromophenyl)-1,2,4-oxadiazole
453566-32-0P, 3-(5-Cyano-2-pyridyl)-5-(3-bromo-5-fluorophenyl)-1,2,4-oxadiazole 453566-34-2P, 3-(2-Pyridyl)-5-(5-bromo-2-methoxyphenyl)-1,2,4-oxadiazole 453566-35-3P, 3-(2-Pyridyl)-5-(5-bromo-2-fluorophenyl)-1,2,4-oxadiazole 453566-37-5P, 3-(2-Pyridyl)-5-(5-bromopyrid-3-yl)-1,2,4-oxadiazole 453566-40-0P, 3-(5-Fluoropyrid-2-yl)-5-(5-bromopyrid-3-yl)-1,2,4-oxadiazole 453566-46-6P, 3-(2-Pyridyl)-5-(3-cyano-5-methylphenyl)-1,2,4-oxadiazole 453566-48-8P, 3-(2-Pyridyl)-5-(3-fluoro-5-bromophenyl)-1,2,4-oxadiazole 453566-50-2P, 3-(5-Fluoro-2-pyridyl)-5-(3-fluoro-5-bromophenyl)-1,2,4-oxadiazole 453566-51-3P, 3-(2-Pyridyl)-5-[3-allyloxy-5-(methoxycarbonyl)phenyl]-1,2,4-oxadiazole 453566-52-4P, 3-(2-Pyridyl)-5-[3-iodo-5-(methoxycarbonyl)phenyl]-1,2,4-oxadiazole
453566-53-5P, 3-(2-Pyridyl)-5-[3-methoxy-5-(methoxycarbonyl)phenyl]-1,2,4-oxadiazole 453566-54-6P, 3-(2-Pyridyl)-5-(3-bromo-5-cyanophenyl)-1,2,4-

oxadiazole 453566-55-7P, 3-(2-Pyridyl)-5-(5-cyano-3-iodophenyl)-1,2,4-oxadiazole 453566-86-4P, 3-(2-Pyridyl)-5-(3-cyano-5-nitrophenyl)-1,2,4-oxadiazole 453566-87-5P, 3-(5-Fluoropyrid-2-yl)-5-(3-cyano-5-nitrophenyl)-1,2,4-oxadiazole 453567-04-9P, 3-(5-Fluoropyrid-2-yl)-5-(3-bromophenyl)-1,2,4-oxadiazole 453567-05-0P, 5-(2-Chloro-6-methylpyrid-4-yl)-3-(2-pyridyl)-1,2,4-oxadiazole 453567-06-1P, 5-(2-Chloro-6-methoxypyrid-4-yl)-3-(2-pyridyl)-1,2,4-oxadiazole 453567-08-3P, 3-(5-Bromopyrid-3-yl)-5-(2-pyridyl)-1,2,4-oxadiazole 453567-09-4P, 3-(3-Cyano-5-fluorophenyl)-5-(2-pyridyl)-1,2,4-oxadiazole 453567-10-7P, 3-(3-Iodophenyl)-5-(2-pyridyl)-1,2,4-oxadiazole 453567-36-7P, 3-(5-Fluoro-2-pyridyl)-5-[3-fluoro-5-(3-pyridyl)phenyl]-1,2,4-oxadiazole 453567-41-4P, 3-(Pyrid-2-yl)-5-[3-fluoro-5-(methylthio)phenyl]-1,2,4-oxadiazole 453567-96-9P, 3-(2-Pyridyl)-5-(3-cyano-5-vinylphenyl)-1,2,4-oxadiazole 453567-99-2P 453568-01-9P, 3-(2-Pyridyl)-5-(3-carboxy-5-methoxyphenyl)-1,2,4-oxadiazole 453568-02-0P, 3-(2-Pyridyl)-5-[3-(carboxamido)-5-methoxyphenyl]-1,2,4-oxadiazole 453568-04-2P, 3-(2-Pyridyl)-5-(3-allyloxy-5-cyanophenyl)-1,2,4-oxadiazole 453568-05-3P, 3-(2-Pyridyl)-5-(3-cyano-5-hydroxyphenyl)-1,2,4-oxadiazole 453568-20-2P, 3-(5-Fluoropyrid-2-yl)-5-(3-amino-5-cyanophenyl)-1,2,4-oxadiazole 453568-31-5P, 3-(5-Fluoropyrid-2-yl)-5-[3-fluoro-5-(1H-tetrazol-5-yl)phenyl]-1,2,4-oxadiazole 453568-45-1P, 2-(3-Iodophenyl)-4-(pyridin-2-yl)-1,3-thiazole 453568-48-4P, 2-(2-Pyridyl)-5-(3-iodophenyl)-1,3,4-oxadiazole 453568-77-9P, 2-(3-Cyano-5-methoxyphenyl)-4-(pyrid-2-yl)-1,3-oxazole
RL: PAC (Pharmacological activity); RCT (Reactant); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); RACT (Reactant or reagent); USES (Uses)
(drug candidate; preparation of pyridyl- and phenyl-substituted oxadiazoles and analogs as metabotropic glutamate receptor antagonists for inhibiting neuronal damage)

IT 27199-42-4P, 3-(2-Pyridyl)-5-(2-chlorophenyl)-1,2,4-oxadiazole 76591-82-7P, 3-(2-Pyridyl)-5-(3-chlorophenyl)-1,2,4-triazole 327056-07-5P, 3-(2-Pyridyl)-5-(3,5-dichlorophenyl)-1,2,4-oxadiazole 327056-08-6P, 3-(2-Pyridyl)-5-(3-chlorophenyl)-1,2,4-oxadiazole 327056-09-7P, 3-(2-Pyridyl)-5-(3-methoxyphenyl)-1,2,4-oxadiazole 327056-10-0P, 3-(2-Pyridyl)-5-[3-(trifluoromethyl)phenyl]-1,2,4-oxadiazole 327056-11-1P, 3-(2-Pyridyl)-5-(3-fluorophenyl)-1,2,4-oxadiazole 327056-12-2P, 3-(2-Pyridyl)-5-(3-methylphenyl)-1,2,4-oxadiazole 327056-13-3P, 3-(2-Pyridyl)-5-(1-naphthyl)-1,2,4-oxadiazole 327056-14-4P, 3-(2-Pyridyl)-5-[3-(trifluoromethoxy)phenyl]-1,2,4-oxadiazole 327056-15-5P, 3-(2-Pyridyl)-5-(2,3-difluorophenyl)-1,2,4-oxadiazole 327056-16-6P, 3-(2-Pyridyl)-5-(2,5-difluorophenyl)-1,2,4-oxadiazole 327056-17-7P, 3-(2-Pyridyl)-5-(3,5-difluorophenyl)-1,2,4-oxadiazole 327056-18-8P, 3-(2-Pyridyl)-5-(3-cyanophenyl)-1,2,4-oxadiazole 327056-19-9P, 3-(2-Pyridyl)-5-(3,5-dimethoxyphenyl)-1,2,4-oxadiazole 327056-20-2P, 3-(2-Pyridyl)-5-(2,3-dichlorophenyl)-1,2,4-oxadiazole 327056-21-3P, 3-(2-Pyridyl)-5-(3-chloro-5-cyanophenyl)-1,2,4-oxadiazole 327056-23-5P, 3-(2-Pyridyl)-5-(3-chloro-5-fluorophenyl)-1,2,4-oxadiazole 327056-24-6P, 3-(5-Chloropyrid-2-yl)-5-(3-cyanophenyl)-1,2,4-oxadiazole 327056-25-7P, 3-(5-Fluoropyrid-2-yl)-5-(3-cyanophenyl)-1,2,4-oxadiazole 327056-27-9P, 3-(3-Fluoropyrid-2-yl)-5-(3-cyanophenyl)-1,2,4-oxadiazole 327056-28-0P, 3-(5-Fluoropyrid-2-yl)-5-(3,5-dimethoxyphenyl)-1,2,4-oxadiazole 327056-29-1P, 3-(5-Methoxypyrid-2-yl)-5-(3-cyanophenyl)-1,2,4-oxadiazole 327056-30-4P, 3-(2-Quinolinyl)-5-(3-cyanophenyl)-1,2,4-oxadiazole 327056-31-5P, 3-(3-Chloro-5-trifluoromethylpyrid-2-yl)-5-(3-cyanophenyl)-1,2,4-oxadiazole 327056-32-6P, 3-(2-Pyridyl)-5-(5-chloro-2-methoxyphenyl)-1,2,4-oxadiazole 327056-33-7P, 3-(2-Pyridyl)-5-(2,3-dimethoxyphenyl)-1,2,4-oxadiazole 327056-34-8P, 3-(2-Pyridyl)-5-[2-chloro-5-(methylthio)phenyl]-1,2,4-oxadiazole 327056-35-9P, 3-(2-Pyridyl)-5-(3-phenoxyphenyl)-1,2,4-oxadiazole 327056-36-0P, 3-(2-Pyridyl)-5-(3-benzoylphenyl)-1,2,4-oxadiazole 327056-38-2P, 3-(2-Pyridyl)-5-[2-chloro-5-(trifluoromethyl)phenyl]-1,2,4-oxadiazole 327056-39-3P, 3-(2-Pyridyl)-5-(3,4,5-trifluorophenyl)-1,2,4-

oxadiazole 327056-40-6P, 3-(2-Pyridyl)-5-(2,5,6-trifluorophenyl)-1,2,4-oxadiazole 327056-41-7P, 3-(Pyrid-2-yl)-5-(2-hydroxyphenyl)-1,2,4-oxadiazole 327056-42-8P, 3-(2-Pyridyl)-5-(5-chloro-2-hydroxyphenyl)-1,2,4-oxadiazole 327056-43-9P, 3-(2-Pyridyl)-5-(2-aminophenyl)-1,2,4-oxadiazole 327056-44-0P, 3-(2-Pyridyl)-5-(2-amino-5-chlorophenyl)-1,2,4-oxadiazole 327056-45-1P, 2-(3-Chlorophenyl)-4-(pyridin-2-yl)-1,3-oxazole 327056-47-3P, 2-(3-Cyanophenyl)-4-(pyridin-2-yl)-1,3-oxazole 327056-48-4P, 5-(3-Hydroxyphenyl)-3-(pyridin-2-yl)-1,2-oxazole 327056-49-5P, 3-(2-Pyridyl)-5-(3-iodophenyl)-1,2,4-triazole 327058-75-3P, 3-(3-Methoxyphenyl)-5-(2-pyridyl)-1,2,4-oxadiazole 327058-83-3P, 5-(3-Cyanophenyl)-3-(pyridin-2-yl)-1,2-oxazole 453566-23-9P, 3-(5-Methylpyrid-2-yl)-5-(3-cyanophenyl)-1,2,4-oxadiazole 453566-24-0P, 3-(5-Cyanopyrid-2-yl)-5-(3-cyanophenyl)-1,2,4-oxadiazole 453566-30-8P, 3-(5-Cyano-2-pyridyl)-5-(3-cyano-5-fluorophenyl)-1,2,4-oxadiazole 453566-36-4P, 3-(2-Pyridyl)-5-(5-cyano-2-fluorophenyl)-1,2,4-oxadiazole 453566-38-6P, 3-(2-Pyridyl)-5-(5-chloropyrid-3-yl)-1,2,4-oxadiazole 453566-39-7P, 3-(5-Cyanopyrid-2-yl)-5-(5-bromopyrid-3-yl)-1,2,4-oxadiazole 453566-41-1P, 3-(2-Pyridyl)-5-[2-(methylthio)pyrid-3-yl]-1,2,4-oxadiazole 453566-42-2P, 3-(2-Pyridyl)-5-(5-methylpyrid-3-yl)-1,2,4-oxadiazole 453566-43-3P, 3-(2-Pyridyl)-5-(5-hydroxypyrid-3-yl)-1,2,4-oxadiazole 453566-44-4P, 3-(2-Pyridyl)-5-(5-methoxypyrid-3-yl)-1,2,4-oxadiazole 453566-49-9P, 3-(2-Pyridyl)-5-(3-iodo-5-bromophenyl)-1,2,4-oxadiazole 453566-56-8P, 3-(2-Pyridyl)-5-[3-(N,N-dimethylamino)phenyl]-1,2,4-oxadiazole 453566-57-9P, 3-(5-Chloropyrid-2-yl)-5-(3-cyano-5-fluorophenyl)-1,2,4-oxadiazole 453566-58-0P, 3-(5-Chloropyrid-2-yl)-5-(3-cyano-5-chlorophenyl)-1,2,4-oxadiazole 453566-59-1P, 3-(5-Chloropyrid-2-yl)-5-(3-chloro-5-fluorophenyl)-1,2,4-oxadiazole 453566-60-4P, 3-(5-Chloropyrid-2-yl)-5-(3-cyano-5-methoxyphenyl)-1,2,4-oxadiazole 453566-62-6P, 3-(5-Fluoropyrid-2-yl)-5-(3-cyano-5-chlorophenyl)-1,2,4-oxadiazole 453566-63-7P, 3-(5-Fluoropyrid-2-yl)-5-(3-fluoro-5-chlorophenyl)-1,2,4-oxadiazole 453566-64-8P, 3-(5-Fluoropyrid-2-yl)-5-(3-cyano-5-methoxyphenyl)-1,2,4-oxadiazole 453566-65-9P, 3-(5-Cyanopyrid-2-yl)-5-(3-cyano-5-chlorophenyl)-1,2,4-oxadiazole 453566-66-0P, 3-(5-Cyanopyrid-2-yl)-5-(3-fluoro-5-chlorophenyl)-1,2,4-oxadiazole 453566-67-1P, 3-(5-Cyanopyrid-2-yl)-5-(3-cyano-5-methoxyphenyl)-1,2,4-oxadiazole 453566-68-2P, 3-(5-Fluoropyrid-2-yl)-5-(3,5-dicyanophenyl)-1,2,4-oxadiazole 453566-69-3P, 3-[3-(4-Dimethylaminobutoxy)pyrid-2-yl]-5-(3-cyano-5-fluorophenyl)-1,2,4-oxadiazole 453566-73-9P, 3-[3-(5-Dimethylaminopentyloxy)pyrid-2-yl]-5-(3-cyano-5-fluorophenyl)-1,2,4-oxadiazole 453566-76-2P, 3-[3-(6-Dimethylaminohexyloxy)pyrid-2-yl]-5-(3-cyano-5-fluorophenyl)-1,2,4-oxadiazole 453566-78-4P, 3-(5-Fluoropyrid-2-yl)-5-[5-fluoro-3-(methylthio)phenyl]-1,2,4-oxadiazole 453566-79-5P, 5-(2-Pyridyl)-3-[3-(1H-imidazol-1-yl)-5-fluorophenyl]-1,2,4-oxadiazole 453566-80-8P, 3-(2-Pyridyl)-5-(3-fluoro-5-trifluoromethylphenyl)-1,2,4-oxadiazole 453566-81-9P, 3-(5-Fluoro-2-pyridyl)-5-(3-fluoro-5-trifluoromethylphenyl)-1,2,4-oxadiazole 453566-82-0P, 3-(5-Cyanopyrid-2-yl)-5-(3-alloxy-5-cyanophenyl)-1,2,4-oxadiazole 453566-83-1P, 3-(5-Fluoropyrid-2-yl)-5-(3-alloxy-5-cyanophenyl)-1,2,4-oxadiazole 453566-84-2P, 3-(5-Cyanopyrid-2-yl)-5-(3-cyano-5-propoxyphenyl)-1,2,4-oxadiazole 453566-85-3P, 3-(5-Fluoropyrid-2-yl)-5-(3-cyano-5-propoxyphenyl)-1,2,4-oxadiazole 453566-88-6P, 3-(5-Fluoropyrid-2-yl)-5-(3-cyano-5-dimethylaminophenyl)-1,2,4-oxadiazole 453566-89-7P, 3-(5-Fluoropyrid-2-yl)-5-[3-cyano-5-(2-methoxyethoxy)phenyl]-1,2,4-oxadiazole 453566-90-0P, 3-(5-Fluoropyrid-2-yl)-5-[3-cyano-5-(1H-imidazol-1-ylmethyl)phenyl]-1,2,4-oxadiazole 453566-91-1P, 3-(2-Pyridyl)-5-[3-cyano-5-(methoxymethyl)phenyl]-1,2,4-oxadiazole 453566-92-2P, 3-(3-Cyano-5-methoxyphenyl)-5-(2-pyridyl)-1,2,4-oxadiazole 453566-93-3P, 3-(3-Cyano-5-methoxyphenyl)-5-(5-fluoropyrid-2-yl)-1,2,4-oxadiazole 453566-95-5P, 3-(5-Fluoropyrid-2-yl)-5-(3-cyano-5-ethoxyphenyl)-1,2,4-oxadiazole 453566-96-6P, 3-(5-Cyanopyrid-2-yl)-5-(3-cyano-5-ethoxyphenyl)-1,2,4-oxadiazole 453566-97-7P, 3-(5-Chloropyrid-2-yl)-5-(3-

allyloxy-5-cyanophenyl)-1,2,4-oxadiazole 453566-98-8P, 3-(5-Chloropyrid-2-yl)-5-(3-cyano-5-propoxyphenyl)-1,2,4-oxadiazole 453566-99-9P, 3-(5-Chloropyrid-2-yl)-5-(3-cyano-5-ethoxyphenyl)-1,2,4-oxadiazole 453567-00-5P, 3-(5-Fluoropyrid-2-yl)-5-(3-cyano-5-hexyloxyphenyl)-1,2,4-oxadiazole 453567-01-6P, 3-(5-Fluoropyrid-2-yl)-5-[3-cyano-5-(methoxymethyl)phenyl]-1,2,4-oxadiazole 453567-02-7P, 3-(5-Fluoropyrid-2-yl)-5-(5-cyano-2-methoxyphenyl)-1,2,4-oxadiazole 453567-03-8P, 5-(5-Cyano-2-methoxyphenyl)-3-(5-cyanopyrid-2-yl)-1,2,4-oxadiazole 453567-07-2P, 3-(3-Cyano-5-methylphenyl)-5-(2-pyridyl)-1,2,4-oxadiazole 453567-11-8P, 3-(3-Cyanophenyl)-5-(2-pyridyl)-1,2,4-oxadiazole 453567-12-9P, 3-(3-Cyano-5-dimethylaminophenyl)-5-(2-pyridyl)-1,2,4-oxadiazole 453567-13-0P, 3-(3-Cyano-5-methylphenyl)-5-(5-fluoropyrid-2-yl)-1,2,4-oxadiazole 453567-14-1P, 3-(3-Cyano-5-fluorophenyl)-5-(5-fluoropyrid-2-yl)-1,2,4-oxadiazole 453567-15-2P, 5-(4-Cyanophenyl)-3-(6-cyanopyrid-2-yl)-1,2,4-oxadiazole 453567-16-3P, 5-(3-Cyano-5-trifluoromethoxyphenyl)-3-(2-pyridyl)-1,2,4-oxadiazole 453567-17-4P, 5-(3-Methoxycarbonyl-5-trifluoromethoxyphenyl)-3-(2-pyridyl)-1,2,4-oxadiazole 453567-18-5P, 5-(3-Cyano-5-trifluoromethoxyphenyl)-3-(5-fluoropyrid-2-yl)-1,2,4-oxadiazole 453567-19-6P, 3-(5-Cyanopyrid-2-yl)-5-(3-cyano-5-trifluoromethoxyphenyl)-1,2,4-oxadiazole 453567-20-9P, 3-(3-Cyano-5-dimethylaminophenyl)-5-(5-fluoropyrid-2-yl)-1,2,4-oxadiazole 453567-21-0P, 5-(5-Chloropyrid-2-yl)-3-(3-cyano-5-methoxyphenyl)-1,2,4-oxadiazole 453567-22-1P, 5-(5-Chloropyrid-2-yl)-3-(3-cyano-5-dimethylaminophenyl)-1,2,4-oxadiazole 453567-23-2P, 5-(5-Chloropyrid-2-yl)-3-(6-cyano-4-methoxypyrid-2-yl)-1,2,4-oxadiazole 453567-24-3P, 5-(5-Chloropyrid-2-yl)-3-(6-cyano-4-hydroxypyrid-2-yl)-1,2,4-oxadiazole 453567-25-4P, 5-(5-Chloropyrid-2-yl)-3-(3-cyano-5-trifluoromethoxyphenyl)-1,2,4-oxadiazole 453567-27-6P, 5-(5-Chloropyrid-2-yl)-3-(3-cyanophenyl)-1,2,4-oxadiazole 453567-28-7P, 5-(5-Chloropyrid-2-yl)-3-(3-cyano-5-methylphenyl)-1,2,4-oxadiazole 453567-29-8P, 5-(5-Chloropyrid-2-yl)-3-(3-cyano-5-fluorophenyl)-1,2,4-oxadiazole 453567-30-1P, 3-(3-Cyano-5-trifluoromethoxyphenyl)-5-(2-pyridyl)-1,2,4-oxadiazole 453567-31-2P, 3-(3-Fluoro-5-methoxyphenyl)-5-(2-pyridyl)-1,2,4-oxadiazole 453567-32-3P, 3-(3-Cyanophenyl)-5-(5-fluoropyrid-2-yl)-1,2,4-oxadiazole 453567-33-4P, 3-(3-Cyano-5-trifluoromethoxyphenyl)-5-(5-fluoropyrid-2-yl)-1,2,4-oxadiazole 453567-34-5P, 3-(3-Fluoro-5-methoxyphenyl)-5-(5-fluoropyrid-2-yl)-1,2,4-oxadiazole 453567-35-6P, 3-(3,5-Dimethoxyphenyl)-5-(5-fluoropyrid-2-yl)-1,2,4-oxadiazole 453567-37-8P, 3-(5-Fluoro-2-pyridyl)-5-[3-bromo-5-(3-pyridyl)phenyl]-1,2,4-oxadiazole 453567-38-9P, 3-(5-Fluoro-2-pyridyl)-5-(3-fluoro-5-methoxyphenyl)-1,2,4-oxadiazole 453567-39-0P, 3-(Pyrid-2-yl)-5-[3-cyano-5-(methylthio)phenyl]-1,2,4-oxadiazole 453567-40-3P, 3-(5-Fluoropyrid-2-yl)-5-[3-cyano-5-(methylthio)phenyl]-1,2,4-oxadiazole 453567-42-5P, 3-(Pyrid-2-yl)-5-[3-fluoro-5-(methylsulfinyl)phenyl]-1,2,4-oxadiazole 453567-43-6P, 3-(Pyrid-2-yl)-5-[3-fluoro-5-(ethylthio)phenyl]-1,2,4-oxadiazole 453567-45-8P, 3-(Pyrid-2-yl)-5-[5-fluoro-3-(tert-butylthio)phenyl]-1,2,4-oxadiazole 453567-46-9P, 3-(5-Fluoropyrid-2-yl)-5-(3-cyano-5-methylphenyl)-1,2,4-oxadiazole 453567-47-0P, 3-(5-Cyanopyrid-2-yl)-5-(3-cyano-5-methylphenyl)-1,2,4-oxadiazole 453567-48-1P, 3-(5-Fluoropyrid-2-yl)-5-(4-cyano-2-thienyl)-1,2,4-oxadiazole 453567-49-2P, 3-(2-Pyridyl)-5-(5-cyano-2-methoxyphenyl)-1,2,4-oxadiazole 453567-50-5P, 3-(2-Pyridyl)-5-(2-cyano-5-methoxyphenyl)-1,2,4-oxadiazole 453567-51-6P, 3-(2-Pyridyl)-5-(5-cyanopyrid-3-yl)-1,2,4-oxadiazole 453567-52-7P, 3-(2-Pyridyl)-5-[3-cyano-5-(methoxycarbonyl)phenyl]-1,2,4-oxadiazole 453567-54-9P, 3-(5-Fluoro-2-pyridyl)-5-(3-cyano-5-trifluoromethylphenyl)-1,2,4-oxadiazole 453567-56-1P, 3-(2-Pyridyl)-5-[3-cyano-5-(4-pyridyl)phenyl]-1,2,4-oxadiazole 453567-57-2P, 3-(2-Pyridyl)-5-[2-methoxy-5-(4-pyridyl)phenyl]-1,2,4-oxadiazole 453567-58-3P, 3-(2-Pyridyl)-5-[2-fluoro-5-(4-pyridyl)phenyl]-1,2,4-oxadiazole 453567-59-4P, 3-(2-Pyridyl)-5-[3-fluoro-5-(4-pyridyl)phenyl]-1,2,4-oxadiazole 453567-60-7P, 3-(2-Pyridyl)-5-[3-fluoro-5-(3-pyridyl)phenyl]-1,2,4-oxadiazole 453567-61-8P, 3-(2-Pyridyl)-5-[2-

fluoro-5-(3-pyridyl)phenyl]-1,2,4-oxadiazole 453567-62-9P, 3-(2-Pyridyl)-5-[2-methoxy-5-(3-pyridyl)phenyl]-1,2,4-oxadiazole 453567-63-0P, 3-(2-Pyridyl)-5-[3-cyano-5-(3-pyridyl)phenyl]-1,2,4-oxadiazole 453567-64-1P, 3-(5-Fluoropyrid-2-yl)-5-[5-(3-pyridyl)pyrid-3-yl]-1,2,4-oxadiazole 453567-65-2P, 3-(2-Pyridyl)-5-[5-(3-pyridyl)pyrid-3-yl]-1,2,4-oxadiazole 453567-66-3P, 3-(5-Cyanopyrid-2-yl)-5-[3-(pyrid-3-yl)phenyl]-1,2,4-oxadiazole 453567-67-4P, 3-(5-Cyanopyrid-2-yl)-5-[3-(pyrid-3-yl)phenyl]-1,2,4-oxadiazole dihydrochloride 453567-68-5P, 3-(5-Cyanopyrid-2-yl)-5-[3-fluoro-5-(pyrid-3-yl)phenyl]-1,2,4-oxadiazole 453567-69-6P, 3-(5-Cyanopyrid-2-yl)-5-[3-fluoro-5-(pyrid-3-yl)phenyl]-1,2,4-oxadiazoledihydrochlorid 453567-70-9P, 3-(2-Pyridyl)-5-[3-(3-fluorophenyl)-5-fluorophenyl]-1,2,4-oxadiazole 453567-71-0P, 3-(2-Pyridyl)-5-[3-cyano-5-(3-thienyl)phenyl]-1,2,4-oxadiazole 453567-72-1P, 3-(2-Pyridyl)-5-[5-(3-thienyl)pyrid-3-yl]-1,2,4-oxadiazole 453567-73-2P, 3-(2-Pyridyl)-5-[5-(3-furyl)pyrid-3-yl]-1,2,4-oxadiazole 453567-74-3P, 3-(2-Pyridyl)-5-(5-phenylpyrid-3-yl)-1,2,4-oxadiazole 453567-75-4P, 3-(2-Pyridyl)-5-[5-(3-methoxyphenyl)pyrid-3-yl]-1,2,4-oxadiazole 453567-76-5P, 3-(2-Pyridyl)-5-[3-cyano-5-(5-pyrimidyl)phenyl]-1,2,4-oxadiazole 453567-77-6P, 3-(2-Pyridyl)-5-[3-cyano-5-(3-aminophenyl)phenyl]-1,2,4-oxadiazole 453567-78-7P, 3-(2-Pyridyl)-5-[3-cyano-5-(3-fluorophenyl)phenyl]-1,2,4-oxadiazole 453567-79-8P, 3-(2-Pyridyl)-5-[5-(5-pyrimidyl)pyrid-3-yl]-1,2,4-oxadiazole 453567-80-1P, 3-(5-Fluoropyrid-2-yl)-5-[3-(3-pyridyl)phenyl]-1,2,4-oxadiazole 453567-82-3P, 5-[2-Methyl-6-(3-pyridyl)pyrid-4-yl]-3-(2-pyridyl)-1,2,4-oxadiazole 453567-83-4P, 5-[2-Methoxy-6-(3-pyridyl)pyrid-4-yl]-3-(2-pyridyl)-1,2,4-oxadiazole 453567-84-5P, 5-(2-Pyridyl)-3-[5-(3-pyridyl)pyrid-3-yl]-1,2,4-oxadiazole 453567-85-6P, 5-(2-Pyridyl)-3-[3-(3-pyridyl)phenyl]-1,2,4-oxadiazole 453567-86-7P, 5-(2-Pyridyl)-3-[3-(3-pyridyl)phenyl]-1,2,4-oxadiazole hydrochloride 453567-87-8P, 5-(5-Fluoropyrid-2-yl)-3-[3-fluoro-5-(3-pyridyl)phenyl]-1,2,4-oxadiazole 453567-90-3P, 3-(2-Pyridyl)-5-[3-cyano-5-(2-pyridyl)phenyl]-1,2,4-oxadiazole 453567-91-4P, 3-(2-Pyridyl)-5-[2-methoxy-5-(2-pyridyl)phenyl]-1,2,4-oxadiazole 453567-92-5P, 3-(2-Pyridyl)-5-[2-fluoro-5-(2-pyridyl)phenyl]-1,2,4-oxadiazole 453567-93-6P, 3-(2-Pyridyl)-5-(3-aminomethyl-5-cyanophenyl)-1,2,4-oxadiazole 453567-95-8P, 3-(2-Pyridyl)-5-[5-(prop-1-en-2-yl)pyrid-3-yl]-1,2,4-oxadiazole 453567-97-0P, 3-(2-Pyridyl)-5-[3-cyano-5-(2-hydroxyethyl)phenyl]-1,2,4-oxadiazole 453567-98-1P, 3-(2-Pyridyl)-5-[3-cyano-5-(2,3-dichloropropoxy)phenyl]-1,2,4-oxadiazole 453568-03-1P, 3-(2-Pyridyl)-5-(3-cyano-5-methoxyphenyl)-1,2,4-oxadiazole 453568-06-4P, 3-(2-Pyridyl)-5-[3-cyano-5-[2-(N,N-dimethylamino)ethoxy]phenyl]-1,2,4-oxadiazole 453568-07-5P, 3-(2-Pyridyl)-5-[3-cyano-5-[3-(N,N-dimethylamino)propoxy]phenyl]-1,2,4-oxadiazole 453568-08-6P, 3-(2-Pyridyl)-5-[3-cyano-5-(2-aminoethoxy)phenyl]-1,2,4-oxadiazole 453568-09-7P, 3-(2-Pyridyl)-5-(3-cyano-5-propoxyphenyl)-1,2,4-oxadiazole 453568-10-0P, 3-(2-Pyridyl)-5-[5-cyano-3-(3-hydroxypropyn-1-yl)phenyl]-1,2,4-oxadiazole 453568-11-1P, 3-(2-Pyridyl)-5-[5-(N-benzyl-1,2,5,6-tetrahydropyridin-3-yl)pyrid-3-yl]-1,2,4-oxadiazole 453568-13-3P, 3-(2-Pyridyl)-5-[2-(N-methylamino)phenyl]-1,2,4-oxadiazole 453568-14-4P, 3-(2-Pyridyl)-5-[3-cyano-5-(2-hydroxyethoxy)phenyl]-1,2,4-oxadiazole 453568-15-5P, 3-(2-Pyridyl)-5-(3-cyano-5-isopropoxyphenyl)-1,2,4-oxadiazole 453568-16-6P, 3-(2-Pyridyl)-5-(3-cyano-5-ethoxyphenyl)-1,2,4-oxadiazole 453568-17-7P, 3-(2-Pyridyl)-5-[3-cyano-5-(2,2,2-trifluoroethoxy)phenyl]-1,2,4-oxadiazole 453568-18-8P, 3-(2-Pyridyl)-5-(3-cyano-5-cyclopropylmethoxyphenyl)-1,2,4-oxadiazole 453568-19-9P, 3-(2-Pyridyl)-5-(3-amino-5-cyanophenyl)-1,2,4-oxadiazole 453568-21-3P, 3-(2-Pyridyl)-5-[3-cyano-5-(trifluoromethylsulfonyloxy)phenyl]-1,2,4-oxadiazole 453568-22-4P, 3-(2-Pyridyl)-5-[3-cyano-5-(2-methoxy-2-oxoethoxy)phenyl]-1,2,4-oxadiazole 453568-23-5P, 3-(2-Pyridyl)-5-[3-cyano-5-(2-tert-butoxy-2-oxoethoxy)phenyl]-1,2,4-oxadiazole 453568-24-6P, 3-(2-Pyridyl)-5-[3-cyano-5-(methoxymethoxy)phenyl]-1,2,4-oxadiazole 453568-25-7P, 3-(2-Pyridyl)-5-[3-cyano-5-(2-methoxyethoxy)phenyl]-1,2,4-oxadiazole 453568-26-8P,

3-(5-Fluoropyrid-2-yl)-5-(3-cyano-5-cyclopentylaminophenyl)-1,2,4-oxadiazole 453568-27-9P, 3-(2-Pyridyl)-5-(3-cyano-5-hexyloxyphenyl)-1,2,4-oxadiazole 453568-28-0P, 3-(2-Pyridyl)-5-[3-cyano-5-[[(dimethylamino)carbonyl]oxy]phenyl]-1,2,4-oxadiazole 453568-29-1P, 3-(5-Fluoropyrid-2-yl)-5-(3-cyano-5-ethylaminophenyl)-1,2,4-oxadiazole 453568-30-4P, 3-(5-Fluoropyrid-2-yl)-5-(3-cyano-5-diethylaminophenyl)-1,2,4-oxadiazole 453568-32-6P, 5-[3-Fluoro-5-(1-methyl-1H-tetrazol-5-yl)phenyl]-3-(5-fluoropyrid-2-yl)-1,2,4-oxadiazole 453568-33-7P, 3-(5-Fluoro-2-pyridyl)-5-[3-(1-benzyl-1,2,5,6-tetrahydropyridin-3-yl)-5-fluorophenyl]-1,2,4-oxadiazole 453568-34-8P, 3-(5-Fluoro-2-pyridyl)-5-[3-fluoro-5-(1H-imidazol-4-yl)phenyl]-1,2,4-oxadiazole 453568-36-0P, 1-(3-Cyanophenyl)-4-(5-fluoro-2-pyridyl)-1H-imidazole 453568-39-3P, 3-(2-Pyridyl)-5-[3-(1H-imidazol-1-yl)-5-(methylthio)phenyl]-1,2,4-oxadiazole 453568-40-6P, 3-(2-Pyridyl)-5-[3-(1H-imidazol-1-yl)-5-(methylthio)phenyl]-1,2,4-oxadiazole hydrochloride 453568-41-7P, 3-[3-Cyano-5-(1H-imidazol-1-yl)phenyl]-5-(2-pyridyl)-1,2,4-oxadiazole 453568-42-8P, 3-[3-Cyano-5-(1H-imidazol-1-yl)phenyl]-5-(2-pyridyl)-1,2,4-oxadiazole hydrochloride 453568-43-9P 453568-44-0P, 3-(2-Pyridyl)-5-[3-cyano-5-(1H-imidazol-1-yl)phenyl]-1,2,4-oxadiazole hydrochloride 453568-46-2P, 2-(3-Cyanophenyl)-4-(pyridin-2-yl)-1,3-thiazole 453568-47-3P, 2-(3-Bromo-5-iodophenyl)-4-(pyridin-2-yl)-1,3-oxazole 453568-50-8P, 2-(2-Pyridyl)-5-(3-cyanophenyl)-1,3,4-oxadiazole 453568-51-9P
, 2-(2-Pyridyl)-5-(3-cyanophenyl)-1,3,4-triazole 453568-52-0P, 4-(3-Cyanophenyl)-1-(2-pyridyl)-1H-imidazole 453568-54-2P, 4-(2-Pyridyl)-1-(3-cyanophenyl)-1H-imidazole 453568-55-3P, 3-(2-Pyridyl)-2-(3-cyanophenyl)furan 453568-59-7P, 4-(5-Fluoro-2-pyridyl)-2-(3-cyanophenyl)furan 453568-61-1P, 4-(5-Chloro-2-pyridyl)-2-(3-cyanophenyl)furan 453568-62-2P, 2-(2-Pyridyl)-5-[5-fluoro-3-(1-imidazolyl)phenyl]furan 453568-65-5P, 3-[5-(2-Pyridyl)-2-furyl]benzonitrile 453568-67-7P, 3-[5-(5-Chloro-2-pyridyl)-2-furyl]benzonitrile 453568-68-8P, 3-[5-(5-Cyano-2-pyridyl)-2-furyl]benzonitrile 453568-70-2P, 3-[5-(5-Fluoro-2-pyridyl)-2-furyl]benzonitrile 453568-71-3P, 3-Fluoro-5-[5-(2-pyridyl)-2-furyl]benzonitrile 453568-73-5P, 2-(3-Cyanophenyl)-4-(5-fluoropyrid-2-yl)-1,3-oxazole 453568-74-6P, 2-(3-Cyano-5-fluorophenyl)-4-(5-fluoropyrid-2-yl)-1,3-oxazole 453568-75-7P, 2-(3-Cyano-5-fluorophenyl)-4-(2-pyridyl)-1,3-oxazole 453568-76-8P, 2-(5-Allyloxy-3-cyanophenyl)-4-(5-Fluoropyrid-2-yl)-1,3-oxazole 453568-78-0P, 2-(3-Cyano-5-methoxyphenyl)-4-(5-fluoropyrid-2-yl)-1,3-oxazole 453568-79-1P, 2-(3-Cyano-5-n-propyloxyphenyl)-4-(5-fluoropyrid-2-yl)-1,3-oxazole 453568-80-4P, 2-(3-Cyano-5-methoxyphenyl)-4-(pyrid-2-yl)-5-chloro-1,3-oxazole 453568-81-5P, 3-(Pyrid-2-yl)-5-[3-methoxy-5-(pyrid-3-yl)phenyl]-1,2,4-oxadiazole 453568-82-6P, 3-(5-Fluoropyrid-2-yl)-5-[3-(methoxycarbonyl)-5-(pyrid-3-yl)phenyl]-1,2,4-oxadiazole 453568-83-7P, 3-(5-Fluoropyrid-2-yl)-5-[3-methoxy-5-(pyrid-3-yl)phenyl]-1,2,4-oxadiazole 453568-84-8P, 3-(5-Cyanopyrid-2-yl)-5-[3-methoxy-5-(pyrid-3-yl)phenyl]-1,2,4-oxadiazole 453568-85-9P, 2-(Pyrid-2-yl)-4-(3-bromophenyl)-1,3-oxazole 453568-86-0P, 2-(Pyrid-2-yl)-4-(3-cyanophenyl)-1,3-oxazole 453568-87-1P, 2-(Pyrid-2-yl)-4-[3-(pyrid-3-yl)phenyl]-1,3-oxazole 453568-88-2P, 3-(2-Pyridyl)-5-(3-cyano-5-trifluoromethylphenyl)-1,2,4-oxadiazole
RL: PAC (Pharmacological activity); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(drug candidate; preparation of pyridyl- and phenyl-substituted oxadiazoles and analogs as metabotropic glutamate receptor antagonists for inhibiting neuronal damage)

IT 1620-77-5P, 5-Methyl-2-cyanopyridine 1673-47-8P, 3-Chlorobenzhydrazide 1772-01-6P, Pyrid-2-ylamidoxime 10388-19-9P, 3-Iodobenzamide 16576-78-6P, 4-(2-Pyridyl)imidazole 19731-01-2P, 3-Cyanobenzhydrazide 20319-44-2P, Dimethyl 5-methoxyisophthalate 21368-39-8P, Dimethyl 5-(allyloxy)isophthalate 25026-64-6P, 3-Chloro-5-fluorobenzoic acid 28186-62-1P, 3-Iodo-5-trifluoromethylbenzoic acid 38180-46-0P,

2-Cyano-3-chloropyridine 46331-50-4P, 5-Methoxyisophthalic acid 55484-30-5P, 5-Bromo-2-(2-pyridyl)furan 60494-51-1P, 4-Methoxypyridine-2,6-dicarboxamide 68631-52-7P, Diethyl 4-hydroxy-2,6-pyridinedicarboxylate 71590-08-4P, 3-Methoxycarbonyl-5-methoxybenzoic acid 72081-99-3P, Quinol-2-ylamidoxime 73647-50-4P, 3-Methoxybenzamidoxime 78621-81-5P, 3-Methyl-5-cyanobenzoic acid 88304-58-9P, 4-(3-Cyanophenyl)imidazole 89809-63-2P, 2-Cyano-5-methoxypyridine 89809-64-3P, 2-Cyano-5-chloropyridine 93116-99-5P, 3-Methoxycarbonyl-5-iodobenzoic acid 97509-75-6P, 2-Cyano-3-fluoropyridine 98556-65-1P, 3-Cyano-5-nitrobenzoic acid 106748-26-9P, 3-Iodothiobenzamide 153684-73-2P, 4-(2-Pyridyl)-1-trityl-1H-imidazole 176548-72-4P, 3-Fluoro-5-methoxybenzoic acid 188813-07-2P, Methyl 3-bromo-5-iodobenzoate 199536-01-1P, Methyl 3-amino-5-cyanobenzoate 208934-35-4P, 4-(Tributylstannyl)-1-trityl-1H-imidazole 327056-55-3P, 5-Chloropyrid-2-ylamidoxime 327056-58-6P, 5-Fluoropyrid-2-ylamidoxime 327056-62-2P, 2-Cyano-5-fluoropyridine 327056-65-5P, 5-Methoxypyrid-2-ylamidoxime 327056-66-6P, 3-Fluoropyrid-2-ylamidoxime 327056-71-3P, 3-Chloro-5-cyanobenzoic acid 327056-72-4P, Methyl 3-chloro-5-cyanobenzoate 327056-73-5P, 3-Chloro-5-fluorobenzonitrile 327056-74-6P, 3-Fluoro-5-cyanobenzoic acid 327056-75-7P, Methyl 3-chloro-5-fluorobenzoate 334792-52-8P, Methyl 3-bromo-5-fluorobenzoate 439280-18-9P, 3-Fluoro-5-methoxybenzonitrile 453565-47-4P, 5-Methylpyrid-2-ylamidoxime 453565-48-5P, 5-Cyanopyrid-2-ylamidoxime 453565-49-6P, 5-(tert-Butoxycarbonyl)pyrid-2-ylamidoxime 453565-50-9P, 5-tert-Butoxycarbonyl-2-cyanopyridine 453565-51-0P, 3-Cyano-5-methoxyphenylamidoxime 453565-52-1P, 5-Methoxyisophthalamide 453565-53-2P, 5-Methoxyisophthalonitrile 453565-54-3P, 3-Cyano-5-fluorophenylamidoxime 453565-56-5P, 5-Bromopyrid-3-ylamidoxime 453565-57-6P, 3-Cyano-5-methylphenylamidoxime 453565-58-7P, 3-Cyanophenylamidoxime 453565-59-8P, 3-Iodophenylamidoxime 453565-60-1P, 3-Cyano-5-dimethylaminophenylamidoxime 453565-61-2P, 6-Cyanopyrid-2-ylamidoxime 453565-62-3P, 3-Bromo-5-fluorophenylamidoxime 453565-63-4P, 3-Fluoro-5-methoxyphenylamidoxime 453565-64-5P, 5-Fluoro-3-(methylthio)benzoic acid 453565-65-6P, 3-Fluoro-5-(1H-imidazol-1-yl)benzoic acid 453565-66-7P, 3-Allyloxy-5-cyanobenzoic acid 453565-67-8P, 3-Allyloxy-5-(methoxycarbonyl)benzoic acid 453565-68-9P, Methyl 3-(allyloxy)-5-(aminocarbonyl)benzoate 453565-69-0P, Methyl 3-(allyloxy)-5-cyanobenzoate 453565-70-3P, 3-Cyano-5-propoxybenzoic acid 453565-71-4P, Methyl 3-(aminocarbonyl)-5-propoxybenzoate 453565-72-5P, Methyl 3-cyano-5-propoxybenzoate 453565-73-6P, 3-Cyano-5-dimethylaminobenzoic acid 453565-74-7P, Methyl 3-cyano-5-dimethylaminobenzoate 453565-75-8P, 3-Cyano-5-(2-methoxyethoxy)benzoic acid 453565-76-9P, Methyl 3-cyano-5-hydroxybenzoate 453565-77-0P, Methyl 3-cyano-5-(2-methoxyethoxy)benzoate 453565-78-1P, 3-Cyano-5-(1H-imidazol-1-ylmethyl)benzoic acid 453565-80-5P, Methyl 3-(imidazol-1-ylmethyl)-5-iodobenzoate 453565-81-6P, Methyl 3-cyano-5-(1H-imidazol-1-ylmethyl)benzoate 453565-82-7P, 3-Cyano-5-(methoxymethyl)benzoic acid 453565-83-8P, Methyl 3-(methoxymethyl)-5-iodobenzoate 453565-84-9P, Methyl 3-cyano-5-(methoxymethyl)benzoate 453565-85-0P, 3-Cyano-5-ethoxybenzoic acid 453565-86-1P, Methyl 3-cyano-5-ethoxybenzoate 453565-87-2P, 3-Cyano-5-hexyloxybenzoic acid 453565-88-3P, Methyl 3-cyano-5-hexyloxybenzoate 453565-89-4P, 4-Amino-3-bromo-5-trifluoromethoxybenzoic acid 453565-90-7P, 3-Bromo-5-trifluoromethoxybenzoic acid 453565-91-8P, 3-Cyano-5-trifluoromethoxybenzoic acid 453565-93-0P, 3-Fluoro-5-(3-pyridyl)benzoic acid 453565-94-1P, Methyl 3-fluoro-5-(3-pyridyl)benzoate 453565-95-2P, 3-Fluoro-5-(3-pyridyl)benzoic acid hydrochloride 453565-96-3P, 3-Bromo-5-(3-pyridyl)benzoic acid 453565-97-4P, Methyl 3-bromo-5-(3-pyridyl)benzoate 453565-98-5P, 3-Bromo-5-(3-pyridyl)benzoic acid hydrochloride 453565-99-6P, 3-Cyano-5-(methylthio)benzoic acid 453566-01-3P, 3-Bromo-5-(methylthio)benzoic acid methyl ester 453566-02-4P,

3-Cyano-5-(methylthio)benzoic acid methyl ester 453566-03-5P, 5-Fluoro-3-(methylthio)bromobenzene 453566-04-6P, 5-Fluoro-3-cyano(methylthio)benzene 453566-05-7P, 5-Fluoro-3-(ethylthio)benzoic acid 453566-06-8P, 5-Fluoro-3-(ethylthio)bromobenzene 453566-07-9P, 5-Fluoro-3-cyano(ethylthio)benzene 453566-08-0P, 3,5-Dimethoxyphenylamidoxime 453566-09-1P, 3-Fluoro-5-(1H-imidazol-1-yl)phenylamidoxime 453566-11-5P, 6-Cyano-4-methoxypyrid-2-ylamidoxime 453566-12-6P, Diethyl 4-methoxy-2,6-pyridinedicarboxylate 453566-13-7P, 2,6-Dicyano-4-methoxypyridine 453566-14-8P, 3-Bromo-5-cyanobenzoic acid 453566-15-9P, Methyl 3-bromo-5-cyanobenzoate 453566-16-0P, 3-Cyano-5-iodobenzoic acid 453566-17-1P, 3-Methoxycarbonyl-5-iodobenzamide 453566-18-2P, Methyl 3-cyano-5-iodobenzoate 453566-21-7P, N-[(2,5,6-Trifluorobenzoyl)oxy]pyridine-2-carboximidamide 453566-25-1P, 3-(5-tert-Butoxycarbonyl-2-pyridyl)-5-(3-cyanophenyl)-1,2,4-oxadiazole 453566-26-2P, 3-(5-Hydroxycarbonylpyrid-2-yl)-5-(3-cyanophenyl)-1,2,4-oxadiazole 453566-28-4P, 3-(5-tert-Butoxycarbonyl-2-pyridyl)-5-(3-bromophenyl)-1,2,4-oxadiazole 453566-29-5P, 3-(5-Hydroxycarbonylpyrid-2-yl)-5-(3-bromophenyl)-1,2,4-oxadiazole 453566-31-9P, 3-(5-tert-Butoxycarbonyl-2-pyridyl)-5-(3-cyano-5-fluorophenyl)-1,2,4-oxadiazole 453566-33-1P, 3-(5-tert-Butoxycarbonyl-2-pyridyl)-5-(3-bromo-5-fluorophenyl)-1,2,4-oxadiazole 453566-47-7P, 3-Cyano-5-methylbenzamide 453567-53-8P, 3-(2-Pyridyl)-5-(3-iodo-5-trifluoromethylphenyl)-1,2,4-oxadiazole 453567-55-0P, 3-(5-Fluoro-2-pyridyl)-5-(3-iodo-5-trifluoromethylphenyl)-1,2,4-oxadiazole 453567-89-0P, 3-(3-Bromo-5-fluorophenyl)-5-(5-fluoropyrid-2-yl)-1,2,4-oxadiazole 453567-94-7P, 3-(2-Pyridyl)-5-(3-bromomethyl-5-cyanophenyl)-1,2,4-oxadiazole 453568-00-8P, 3-(2-Pyridyl)-5-(3-allyloxy-5-carboxamidophenyl)-1,2,4-oxadiazole 453568-12-2P, 5-(N-Benzyl-1,2,5,6-tetrahydropyridin-3-yl)pyridine-3-carboxylic acid ethyl ester 453568-35-9P, 3-(5-Fluoro-2-pyridyl)-5-[3-fluoro-5-(1-trityl-1H-imidazol-4-yl)phenyl]-1,2,4-oxadiazole 453568-37-1P, 4-(5-Fluoro-2-pyridyl)-1-trityl-1H-imidazole 453568-38-2P, 4-(5-Fluoro-2-pyridyl)imidazole hydrochloride **453568-49-5P**, N-Picolinoyl-N'-(3-iodobenzoyl)hydrazine 453568-53-1P, 4-(3-Cyanophenyl)-1-trityl-1H-imidazole 453568-56-4P, 3-[Hydroxy[3-[(tetrahydropyran-2-yl)oxy]prop-1-ynyl]methyl]benzonitrile 453568-57-5P, 3-[(3-Hydroxyprop-1-ynyl)carbonyl]benzonitrile 453568-58-6P, 3-Bromo-2-(3-cyanophenyl)furan 453568-63-3P, 1-(3-Bromo-5-fluorophenyl)-1H-imidazole 453568-72-4P, 3-(5-Bromofuran-2-yl)-5-fluorobenzonitrile
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(intermediate; preparation of pyridyl- and phenyl-substituted oxadiazoles and analogs as metabotropic glutamate receptor antagonists for inhibiting neuronal damage)

IT 67-64-1, Acetone, reactions 75-30-9, 2-Iodopropane 79-44-7, Dimethylcarbamyl chloride 96-32-2, Methyl bromoacetate 98-80-6, Phenylboronic acid 98-98-6, Picolinic acid 99-64-9, 3-Dimethylaminobenzoic acid 100-39-0, Benzyl bromide 100-70-9, 2-Cyanopyridine 106-95-6, Allyl bromide, reactions 107-08-4, Propyl iodide 107-19-7, Propargyl alcohol 109-04-6, 2-Bromopyridine 111-25-1, 1-Bromohexane 118-48-9, Isatoic anhydride 118-61-6, Ethyl salicylate 120-92-3, Cyclopentanone 138-60-3, Chelidamic acid 288-32-4, Imidazole, reactions 353-83-3, 2-Iodo-1,1,1-trifluoroethane 402-31-3, 3,5-Bis(trifluoromethyl)benzene 403-54-3, 3-Fluorobenzonitrile 461-96-1, 1-Bromo-3,5-difluorobenzene 535-80-8, 3-Chlorobenzoic acid 579-18-0, 3-Benzoylbenzoic acid 609-65-4, 2-Chlorobenzoyl chloride 618-46-2, 3-Chlorobenzoyl chloride 618-48-4, 3-Chlorobenzamide 618-51-9, 3-Iodobenzoic acid 626-17-5, Isophthalonitrile 627-42-9, 2-Chloroethyl methyl ether 657-06-7, 2-Chloro-5-(trifluoromethyl)benzoic acid 768-35-4, 3-Fluorophenylboronic acid 879-18-5, 1-Naphthoyl chloride 1436-43-7, 2-Quinolinecarbonitrile 1461-22-9, Tributyltin chloride 1521-38-6, 2,3-Dimethoxybenzoic acid 1527-89-5, 3-Methoxybenzonitrile 1692-15-5, 4-Pyridylboronic acid 1711-05-3,

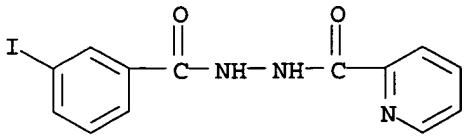
3-Anisoyl chloride 1711-06-4, 3-Toluoyl chloride 1711-07-5, 3-Fluorobenzoyl chloride 1711-09-7, 3-Bromobenzoyl chloride 1711-11-1, 3-Cyanobenzoyl chloride 1877-72-1, 3-Cyanobenzoic acid 1955-46-0, Monomethyl 5-nitroisophthalate 2251-65-2, 3-(Trifluoromethyl)benzoyl chloride 2358-29-4, 2,5,6-Trifluorobenzoic acid 2402-77-9, 2,3-Dichloropyridine 2476-35-9, 5-Bromo-2-methoxybenzoic acid 2893-33-6, 2,6-Dicyanopyridine 2905-60-4, 2,3-Dichlorobenzoyl chloride 2905-62-6, 3,5-Dichlorobenzoyl chloride 2905-67-1, Methyl 3,5-dichlorobenzoate 3222-49-9, 5-Methylnicotinic acid 3438-16-2, 5-Chloro-o-anisic acid 3510-66-5, 2-Bromo-5-methylpyridine 3739-38-6, 3-Phenoxybenzoic acid 4068-78-4, Methyl 5-chloro-2-hydroxybenzoate 4584-46-7, 2-Dimethylaminoethyl chloride hydrochloride 4743-17-3, 5-Chloroisatoic anhydride 5292-43-3, tert-Butyl bromoacetate 5407-04-5, 3-Dimethylaminopropyl chloride hydrochloride 6068-72-0, 4-Cyanobenzoyl chloride 6089-04-9, Tetrahydro-2-(2-propynyloxy)-2H-pyran 6165-69-1, 3-Thiopheneboronic acid 7051-34-5, (Bromomethyl)cyclopropane 10328-92-4, N-Methylisatoic acid anhydride 10365-98-7, 3-Methoxyphenylboronic acid 10401-11-3, 3-Hydroxyphenylacetylene 13036-02-7, Dimethyl 5-hydroxyisophthalate 13737-05-8, Pyrid-2-yltrimethylstannane 15855-06-8, 2-Chloro-6-methoxyisonicotinic acid 16110-09-1, 2,5-Dichloropyridine 17213-57-9, 3,5-Dimethoxybenzoyl chloride 17997-47-6, Tri-n-butyl(2-pyridyl)tin 18355-73-2, 2,3-Difluorobenzoyl chloride 19179-31-8, 3,5-Dimethoxybenzonitrile 20730-07-8, 2,5-Dicyanopyridine 20826-04-4, 5-Bromonicotinic acid 22620-27-5, 5-Chloronicotinic acid 22726-00-7, 3-Bromobenzamide 22921-68-2, 2-Bromo-5-methoxybenzoic acid 24964-64-5, 3-Cyanobenzaldehyde 25462-85-5, 2-Chloro-6-methylisonicotinic acid 26690-80-2, N-(tert-Butoxycarbonyl)ethanolamine 30418-59-8, 3-Aminophenylboronic acid 30766-22-4, 5-Hydroxynicotinic acid methyl ester 31301-51-6, 2-Chloro-5-fluoropyridine 33863-76-2, 1-Bromo-3-chloro-5-fluorobenzene 35590-37-5, 5-Bromonicotinonitrile 35730-09-7, 2,5-Difluorobenzoyl chloride 39115-94-1, 3-Iodobenzhydrazide 39718-07-5, 3,5-Dicyanotoluene 40086-66-6, 2-Bromoacetylpyridine 40114-49-6, N-Benzyl-3-piperidinone 40473-01-6, 5-Chloro-2-bromopyridine 41404-58-4, 5-Fluoro-2-bromopyridine 51546-12-4, 2-Chloro-5-(methylthio)benzoic acid 51839-15-7, Dimethyl 5-iodoisophthalate 55484-03-2, 2-Pyridyl-2-furan 55552-70-0, 3-Furylboronic acid 58123-68-5, 3,5-Dicyanobenzoic acid 64248-63-1, 3,5-Difluorobenzonitrile 69113-59-3, 3-Iodobenzonitrile 69716-28-5, Pyridine-2-carbohydroximoyl chloride 70165-31-0, 6-Cyanonicotinic acid 74470-23-8, 2-(Methylthio)nicotinic acid 84923-71-7, 5-Cyano-2-methoxybenzoic acid 86270-03-3, 3-(Trifluoromethoxy)benzoyl chloride 87498-66-6, Potassium 6-(dimethylamino)hexyloxide 87941-55-7, 4-Bromo-1-trityl-1H-imidazole 96797-15-8, 4-Iodo-1-trityl-1H-imidazole 99066-80-5, Methyl 3-cyano-5-nitrobenzoate 109299-78-7, 5-Pyrimidylboronic acid 112598-77-3, 3-Furan-2-ylbenzonitrile 121602-93-5, 3,4,5-Trifluorobenzoic acid 129714-97-2, 3,5-Difluorobenzoyl chloride 131534-65-1, Pyridine-3-boronic acid 1,3-propanediol ester 146328-85-0, 5-Bromo-2-fluorobenzoic acid 146328-87-2, 5-Cyano-2-fluorobenzoic acid 150255-96-2, 3-Cyanophenylboronic acid 151453-57-5, 5-Dimethylaminoisophthalonitrile 171243-30-4, 3-Fluoro-5-trifluoromethylbenzoyl chloride 175278-22-5, 4-Amino-3-trifluoromethoxybenzoic acid 176548-70-2, 3-Bromo-5-fluorobenzoic acid 179898-34-1, 3-Bromo-5-fluorobenzonitrile 188815-32-9, 3-Bromo-5-iodobenzoic acid 198985-47-6, (5-Chloropyrid-2-yl)trimethylstannane 289039-19-6, 3-Bromo-5-iodobenzamide 303997-55-9, 3-Chloro-5-trifluoromethylpyrid-2-ylamidoxime 321724-19-0, Pyrimidyl-5-boronic acid pinacolate 406719-77-5, 4-Cyano-2-thiophenecarboxylic acid 407623-43-2, 5-Chloropicolinic acid hydrochloride 453565-55-4, 5-Fluoroisophthalonitrile 453565-79-2, Methyl 3-(bromomethyl)-5-iodobenzoate 453566-00-2, 3-Bromo-5-(methylthio)benzoic acid 453566-10-4, 3-Fluoro-5-(1H-imidazol-1-yl)benzonitrile 453566-22-8, 5-(3-Trifluoromethanesulfonyloxyphenyl)-3-

(pyridin-2-yl)-1,2-oxazole 453566-45-5, 5-Methoxynicotinic acid hydrochloride 453566-61-5, 3-Cyano-5-methoxybenzoic acid 453566-70-6, 3-(4-Dimethylaminobutoxy)pyrid-2-ylamidoxime 453566-71-7, 3-(3-Fluoropyrid-2-yl)-5-(3-fluoro-5-cyanophenyl)-1,2,4-oxadiazole 453566-72-8, Potassium 4-(dimethylamino)butoxide 453566-74-0, 3-(5-Dimethylaminopentyloxy)pyrid-2-ylamidoxime 453566-75-1, Potassium 5-(dimethylamino)pentyloxide 453566-77-3, 3-(6-Dimethylaminohexyloxy)pyrid-2-ylamidoxime 453566-94-4, 5-Fluoropicolinic acid hydrochloride 453567-26-5, 3-Cyano-5-trifluoromethoxyphenylamidoxime 453567-44-7, 5-Fluoro-3-(tert-butylthio)benzoic acid 453568-60-0, (5-Fluoropyrid-2-yl)trimethylstannane 453568-66-6, 3-(5-Bromofuran-2-yl)benzonitrile 453568-69-9, 2-Trimethylstannyl-5-cyanopyridine
RL: RCT (Reactant); RACT (Reactant or reagent)
(precursor; preparation of pyridyl- and phenyl-substituted oxadiazoles and analogs as metabotropic glutamate receptor antagonists for inhibiting neuronal damage)

IT 327056-50-8P, 3-(2-Pyridyl)-5-(3-nitrophenyl)-1,2,4-oxadiazole 327056-52-0P, 3-(2-Pyridyl)-5-(3-bromophenyl)-1,2,4-oxadiazole 502422-27-7P, 2-(3,5-Dichlorophenyl)-4-(2-pyridyl)-1,3-oxazole 502422-28-8P, 2-(3-Methoxyphenyl)-4-(2-pyridyl)-1,3-oxazole 502422-29-9P, 2-(2-Chlorophenyl)-4-(2-pyridyl)-1,3-oxazole 502422-30-2P, 2-(3-Trifluoromethylphenyl)-4-(2-pyridyl)-1,3-oxazole 502422-31-3P, 2-(3-Methylphenyl)-4-(2-pyridyl)-1,3-oxazole 502422-32-4P, 2-(1-Naphthyl)-4-(2-pyridyl)-1,3-oxazole 502422-33-5P, 2-(3-Trifluoromethoxyphenyl)-4-(2-pyridyl)-1,3-oxazole 502422-34-6P, 2-(2,3-Difluorophenyl)-4-(2-pyridyl)-1,3-oxazole 502422-35-7P, 2-(2,5-Difluorophenyl)-4-(2-pyridyl)-1,3-oxazole 502422-36-8P, 2-(3,5-Difluorophenyl)-4-(2-pyridyl)-1,3-oxazole 502422-37-9P, 2-(3,5-Dimethoxyphenyl)-4-(2-pyridyl)-1,3-oxazole 502422-38-0P, 2-(2,3-Dichlorophenyl)-4-(2-pyridyl)-1,3-oxazole 502422-39-1P, 2-(3-Chloro-5-cyanophenyl)-4-(2-pyridyl)-1,3-oxazole 502422-40-4P, 2-(3-Chloro-5-fluorophenyl)-4-(2-pyridyl)-1,3-oxazole 502422-41-5P, 2-(3-Cyanophenyl)-4-(5-chloropyridin-2-yl)-1,3-oxazole 502422-42-6P, 2-(3-Cyanophenyl)-4-(3-fluoropyridin-2-yl)-1,3-oxazole 502422-43-7P, 2-(3,5-Dimethoxyphenyl)-4-(5-fluoropyridin-2-yl)-1,3-oxazole 502422-44-8P, 2-(3-Cyanophenyl)-4-(5-methoxypyridin-2-yl)-1,3-oxazole 502422-45-9P, 2-(3-Cyanophenyl)-4-(2-quinolinyl)-1,3-oxazole 502422-46-0P, 2-(3-Cyanophenyl)-4-(3-chloro-5-trifluoromethylpyridin-2-yl)-1,3-oxazole 502422-47-1P, 2-(5-Chloro-2-methoxyphenyl)-4-(2-pyridyl)-1,3-oxazole 502422-48-2P, 2-(2-Chloro-5-methylthiophenyl)-4-(2-pyridyl)-1,3-oxazole 502422-49-3P, 2-(2-Bromo-5-methoxyphenyl)-4-(2-pyridyl)-1,3-oxazole 502422-50-6P, 2-(2,5,6-Trifluorophenyl)-4-(2-pyridyl)-1,3-oxazole 502422-51-7P, 2-(3-Nitrophenyl)-4-(2-pyridyl)-1,3-oxazole
RL: PAC (Pharmacological activity); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(preparation of pyridyl- and phenyl-substituted oxadiazoles and analogs as metabotropic glutamate receptor antagonists for inhibiting neuronal damage)

IT **453568-49-5P**, N-Picolinoyl-N'-(3-iodobenzoyl)hydrazine
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(intermediate; preparation of pyridyl- and phenyl-substituted oxadiazoles and analogs as metabotropic glutamate receptor antagonists for inhibiting neuronal damage)

RN 453568-49-5 HCAPLUS
CN 2-Pyridinecarboxylic acid, 2-(3-iodobenzoyl)hydrazide (9CI) (CA INDEX NAME)



L52 ANSWER 2 OF 25 HCAPLUS COPYRIGHT 2005 ACS on STN
AN 2001:185573 HCAPLUS
DN 134:222632
ED Entered STN: 16 Mar 2001
TI 2-Pyridinecarboxaldehyde isonicotinoylhydrazone iron chelators and uses thereof
IN **Richardson, Des; Bernhardt, Paul Vincent; Becker, Erika Michelle**
PA University of Queensland, Australia; Heart Research Institute Ltd.
SO PCT Int. Appl., 50 pp.
CODEN: PIXXD2
DT Patent
LA English
IC ICM A61K031-4402
ICS A61K031-444; A61K031-443; A61K031-4436; A61P003-00; A61P007-00; A61P043-00; C07D213-53; C07D213-77; C07D401-12; C07D405-12; C07D409-12
CC 27-16 (Heterocyclic Compounds (One Hetero Atom))
Section cross-reference(s): 1
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2001017530	A1	20010315	WO 2000-AU1050	20000904 <--
	WO 2001017530	C2	20020829		
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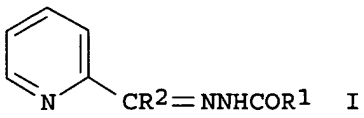
	RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
	CA 2383721	AA	20010315	CA 2000-2383721	20000904 <--
	EP 1212059	A1	20020612	EP 2000-962062	20000904 <--
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL				
	JP 2003525216	T2	20030826	JP 2001-521321	20000904 <--
PRAI	AU 1999-2624	A	19990902 <--		
	WO 2000-AU1050	W	20000904 <--		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
WO 2001017530	ICM	A61K031-4402
	ICS	A61K031-444; A61K031-443; A61K031-4436; A61P003-00; A61P007-00; A61P043-00; C07D213-53; C07D213-77; C07D401-12; C07D405-12; C07D409-12

OS MARPAT 134:222632
GI



I

AB Title compds. I (R1 = aryl, heterocyclyl; R2 = H, OH) were prepared by condensation of 2-pyridinecarboxaldehyde with acid hydrazides. I (R1 = 3-bromophenyl, 2-thienyl) showed iron chelation activity greater than that of desferrioxamine, but their antiproliferative activity was unremarkable.

ST pyridinecarboxaldehyde isonicotinoylhydrazone iron chelator prepn

IT Chelating agents
(2-pyridinecarboxaldehyde isonicotinoylhydrazones)

IT Proliferation inhibition
(proliferation inhibitors; 2-pyridinecarboxaldehyde isonicotinoylhydrazones)

IT 70-51-9, Desferrioxamine 83706-03-0 **257299-41-5** 329183-01-9 **329183-02-0**
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); BIOL (Biological study)
(2-pyridinecarboxaldehyde isonicotinoylhydrazone iron chelators)

IT 213013-18-4P **270576-10-8P 270576-18-6P** **329182-92-5P 329182-93-6P 329182-94-7P** **329182-95-8P 329182-96-9P 329182-97-0P** **329182-98-1P 329182-99-2P** 329183-00-8P
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(2-pyridinecarboxaldehyde isonicotinoylhydrazone iron chelators)

RE.CNT 12 THERE ARE 12 CITED REFERENCES AVAILABLE FOR THIS RECORD

RE

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(2) Becker; The Journal of Laboratory and Clinical Medicine 1999, V134(5), P510 HCAPLUS
(3) Capitan; 1975 HCAPLUS
(4) Capitan; ARS PHARMACEUTICA V16(2), P293 HCAPLUS
(5) Duggal; HCAPLUS
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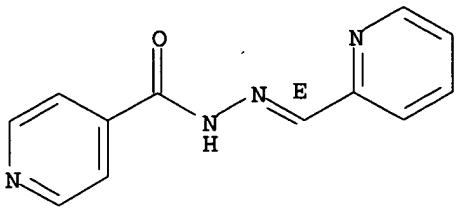
(7) Iki; Mikrochimica Acta 1994, V113(3-6), P137 HCAPLUS
(8) Marutoiu; HCAPLUS
(9) Ponka; HCAPLUS
(10) Richardson; Acta Crystallographica 1999, VC55(12), P2102 HCAPLUS
(11) Uehra; HCAPLUS
(12) Zhao; HCAPLUS

IT **257299-41-5 329183-02-0**
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); BIOL (Biological study)
(2-pyridinecarboxaldehyde isonicotinoylhydrazone iron chelators)

RN 257299-41-5 HCAPLUS

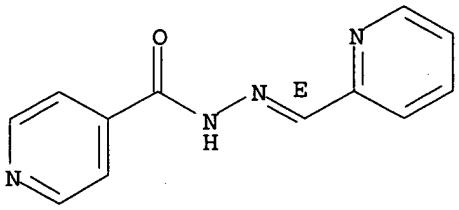
CN 4-Pyridinecarboxylic acid, (2E)-(2-pyridinylmethylene)hydrazide, stereoisomer (9CI) (CA INDEX NAME)

Double bond geometry as shown.



RN 329183-02-0 HCAPLUS
CN 4-Pyridinecarboxylic acid, (2E)-(2-pyridinylmethylene)hydrazide, monohydrochloride (9CI) (CA INDEX NAME)

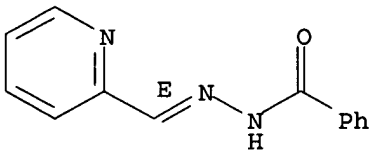
Double bond geometry as shown.



● HCl

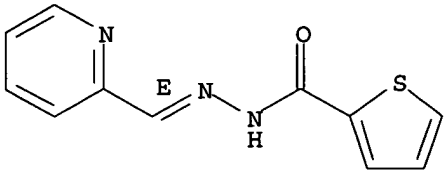
IT **270576-10-8P 270576-18-6P 329182-92-5P**
329182-93-6P 329182-94-7P 329182-95-8P
329182-96-9P 329182-97-0P 329182-98-1P
329182-99-2P
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(2-pyridinecarboxaldehyde isonicotinoylhydrazone iron chelators)
RN 270576-10-8 HCAPLUS
CN Benzoic acid, (2E)-(2-pyridinylmethylene)hydrazide (9CI) (CA INDEX NAME)

Double bond geometry as shown.



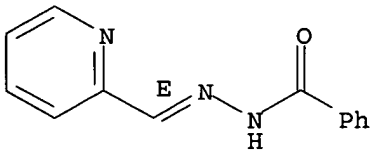
RN 270576-18-6 HCAPLUS
CN 2-Thiophenecarboxylic acid, (2E)-(2-pyridinylmethylene)hydrazide (9CI) (CA INDEX NAME)

Double bond geometry as shown.



RN 329182-92-5 HCAPLUS
CN Benzoic acid, (2E)-(2-pyridinylmethylene)hydrazide, monohydrochloride (9CI) (CA INDEX NAME)

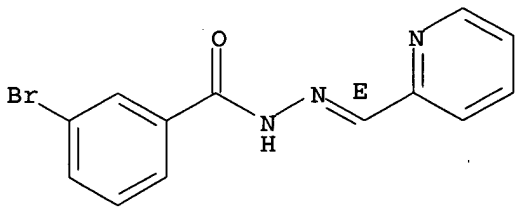
Double bond geometry as shown.



● HCl

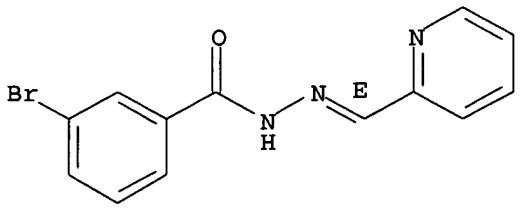
RN 329182-93-6 HCAPLUS
CN Benzoic acid, 3-bromo-, (2E)-(2-pyridinylmethylene)hydrazide (9CI) (CA INDEX NAME)

Double bond geometry as shown.



RN 329182-94-7 HCAPLUS
CN Benzoic acid, 3-bromo-, (2E)-(2-pyridinylmethylene)hydrazide, monohydrochloride (9CI) (CA INDEX NAME)

Double bond geometry as shown.

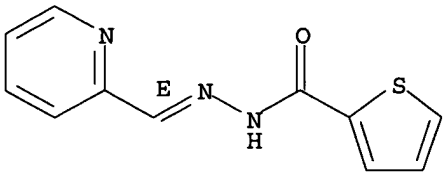


● HCl

RN 329182-95-8 HCAPLUS

CN 2-Thiophenecarboxylic acid, (2E)-(2-pyridinylmethylene)hydrazide, monohydrochloride (9CI) (CA INDEX NAME)

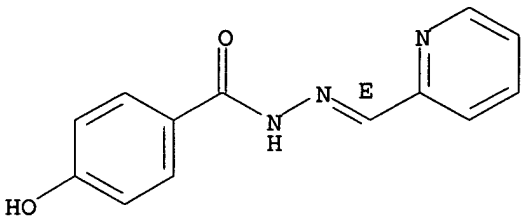
Double bond geometry as shown.



● HCl

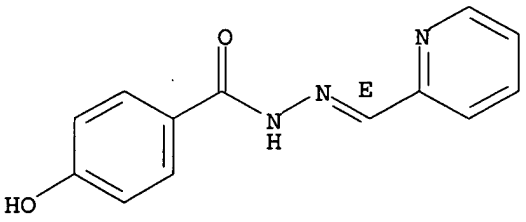
RN 329182-96-9 HCAPLUS
CN Benzoic acid, 4-hydroxy-, (2E)-(2-pyridinylmethylene)hydrazide (9CI) (CA INDEX NAME)

Double bond geometry as shown.



RN 329182-97-0 HCAPLUS
CN Benzoic acid, 4-hydroxy-, (2E)-(2-pyridinylmethylene)hydrazide, monohydrochloride (9CI) (CA INDEX NAME)

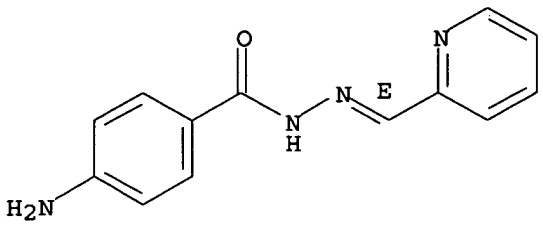
Double bond geometry as shown.



● HCl

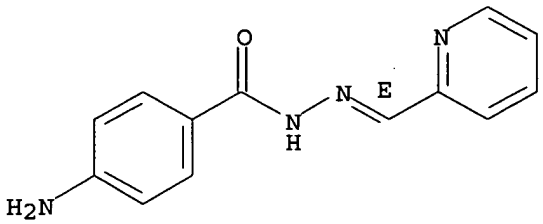
RN 329182-98-1 HCAPLUS
CN Benzoic acid, 4-amino-, (2E)-(2-pyridinylmethylene)hydrazide (9CI) (CA INDEX NAME)

Double bond geometry as shown.



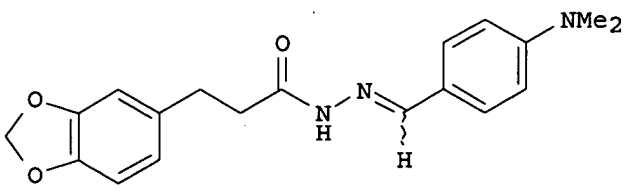
RN 329182-99-2 HCAPLUS
CN Benzoic acid, 4-amino-, (2E)-(2-pyridinylmethylene)hydrazide, monohydrochloride (9CI) (CA INDEX NAME)

Double bond geometry as shown.



● HCl

L52 ANSWER 3 OF 25 HCAPLUS COPYRIGHT 2005 ACS on STN
AN 2000:228176 HCAPLUS
DN 133:256
ED Entered STN: 09 Apr 2000
TI Synthesis and analgesic activity of novel N-acylarylhydrazones and isosters, derived from natural safrole
AU Lima, Patricia C.; Lima, Lidia M.; Da Silva, Kelli Cristine M.; Leda, Paulo Henrique O.; De Miranda, Ana Luisa P.; Fraga, Carlos A. M.; Barreiro, Eliezer J.
CS Instituto de Quimica, Universidade Federal do Rio de Janeiro, Rio de Janeiro, Brazil
SO European Journal of Medicinal Chemistry (2000), 35(2), 187-203
CODEN: EJMCA5; ISSN: 0223-5234
PB Editions Scientifiques et Medicales Elsevier
DT Journal
LA English
CC 1-3 (Pharmacology)
Section cross-reference(s): 28
OS CASREACT 133:256
GI



I

AB A new series of antinociceptive compds. belonging to the N-acylarylhydrazone (NAH) class were synthesized from natural safrole. The most analgesic derivative, benzylidenemethylenedioxyphenylpropionylhydrazine I, was more potent than the stds. dipyrone and indomethacin. The arylhydrazone compds. described herein were structurally planned by mol. hybridization and classical bioisosterism strategies on previously reported analgesic NAH in order to identify the pharmacophoric contribution of the N-acylarylhydrazone moiety and investigate the structure-activity relationship (SAR) in these series. The arylhydrazones except for those derived from 3,4-methylenedioxyphenylpropanoyl hydrazide were prepared stereoselectively as the (E)-isomers.

ST arylhydrazone stereoselective prepn; safrole derived arylhydrazone prepn analgesic activity; structure arylhydrazone deriv analgesic antinociceptive activity

IT Structure-activity relationship
(analgesic; stereoselective preparation and analgesic activity of hydrazones derived from safrole)

IT Hydrazones
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation)
(aromatic; stereoselective preparation and analgesic activity of hydrazones derived from safrole)

IT Analgesics
Stereochemistry
(stereoselective preparation and analgesic activity of hydrazones derived from safrole)

IT 14850-85-2P **257299-41-5P** 270575-91-2P 270575-92-3P
270575-93-4P 270575-94-5P 270575-95-6P 270575-96-7P 270575-97-8P
270575-98-9P 270575-99-0P 270576-00-6P 270576-01-7P 270576-02-8P
270576-03-9P 270576-04-0P 270576-05-1P 270576-07-3P 270576-08-4P
270576-09-5P **270576-10-8P** 270576-12-0P 270576-14-2P
270576-16-4P **270576-18-6P** 270576-20-0P 270576-22-2P
270576-24-4P 270576-27-7P 270576-29-9P
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation)
(stereoselective preparation and analgesic activity of hydrazones derived from safrole)

IT 54-85-3, 4-Pyridinecarboxylic hydrazide 94-59-7, Safrole 100-10-7, 4-(Dimethylamino)benzaldehyde 100-52-7, Benzaldehyde, reactions 105-07-7, 4-Cyanobenzaldehyde 123-11-5, 4-Methoxybenzaldehyde, reactions 459-57-4, 4-Fluorobenzaldehyde 500-22-1, 3-Pyridinecarboxaldehyde 555-16-8, 4-Nitrobenzaldehyde, reactions 613-94-5 872-85-5, 4-Pyridinecarboxaldehyde 1121-60-4, 2-Pyridinecarboxaldehyde 1122-91-4, 4-Bromobenzaldehyde 2361-27-5
RL: RCT (Reactant); RACT (Reactant or reagent)
(stereoselective preparation and analgesic activity of hydrazones derived from safrole)

IT 120-57-0P, Piperonal 120-58-1P 326-56-7P 2815-95-4P, 1,3-Benzodioxole-5-propanoic acid 7031-03-0P, 1,3-Benzodioxole-5-propanol 22026-39-7P 57906-98-6P 88368-72-3P 246033-27-2P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(stereoselective preparation and analgesic activity of hydrazones derived from safrole)

RE.CNT 24 THERE ARE 24 CITED REFERENCES AVAILABLE FOR THIS RECORD

RE

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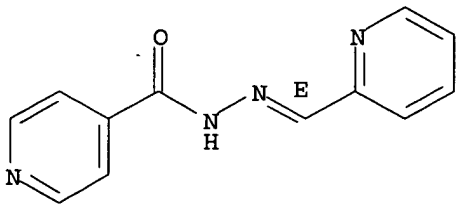
IT **257299-41-5P 270576-10-8P 270576-18-6P**
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation)
(stereoselective preparation and analgesic activity of hydrazones derived from safrole)

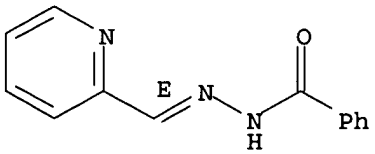
RN 257299-41-5 HCAPLUS
CN 4-Pyridinecarboxylic acid, (2E)-(2-pyridinylmethylene)hydrazide, stereoisomer (9CI) (CA INDEX NAME)

Double bond geometry as shown.



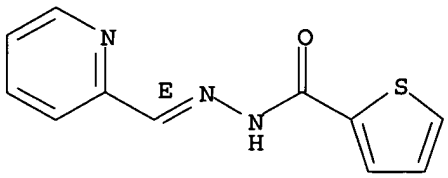
RN 270576-10-8 HCAPLUS
CN Benzoic acid, (2E)-(2-pyridinylmethylene)hydrazide (9CI) (CA INDEX NAME)

Double bond geometry as shown.



RN 270576-18-6 HCAPLUS
CN 2-Thiophenecarboxylic acid, (2E)-(2-pyridinylmethylene)hydrazide (9CI) (CA INDEX NAME)

Double bond geometry as shown.



L52 ANSWER 4 OF 25 HCAPLUS COPYRIGHT 2005 ACS on STN
AN 2000:72793 HCAPLUS
DN 132:202643
ED Entered STN: 30 Jan 2000
TI Cytotoxicity of salicylaldehyde benzoylhydrazone analogs and their transition metal complexes: quantitative structure-activity relationships
AU Ainscough, Eric W.; Brodie, Andrew M.; Denny, William A.; Finlay, Graeme J.; Gothe, Scott A.; Ranford, John D.
CS Department of Chemistry, Institute of Fundamental Sciences, Massey University, Palmerston North, N. Z.
SO Journal of Inorganic Biochemistry (**1999**), 77(3-4), 125-133
CODEN: JIBIDJ; ISSN: 0162-0134
PB Elsevier Science Inc.
DT Journal
LA English
CC 1-3 (**Pharmacology**)
Section cross-reference(s): 78, 79
AB A series of salicylaldehyde benzoylhydrazone derivs., their copper(II) complexes and a range of transition metal complexes of the unsubstituted ligand has been synthesized and evaluated for cytotoxicity against a human adenocarcinoma cell line. A QSAR anal. revealed ligand cytotoxicity is strongly correlated with electronic and transport factors and can be modeled by treating each "half" of the mol. as an isolated unit. Activity increases when substituents in the benzoyl ring were electron withdrawing whereas, for the salicylaldehyde ring, electron donation was required. The cytotoxicity of the Cu(II) complexes was greater than, and paralleled the ligands. Activity for the transition metal complexes of the unsubstituted ligand mirrored charge d. on the metal.
ST salicylaldehyde benzoylhydrazone transition metal complex QSAR; colon anticancer salicylaldehyde benzoylhydrazone deriv structure; copper salicylaldehyde benzoylhydrazone complex cytotoxic QSAR; cisplatin resistance salicylaldehyde benzoylhydrazone analog structure; chelator adenocarcinoma inhibiting SAR metal complex
IT Drug design
Lipophilicity
QSAR (structure-activity relationship)
(QSAR anal of salicylaldehyde benzoylhydrazone analogs and their transition metal complexes)
IT Coordination compounds
Transition metal complexes
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); PRP (Properties); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(QSAR anal of salicylaldehyde benzoylhydrazone analogs and their transition metal complexes)
IT Drug resistance
Structure-activity relationship
(antitumor; QSAR anal of salicylaldehyde benzoylhydrazone analogs and their transition metal complexes)
IT Antitumor agents
(colon adenocarcinoma; QSAR anal of salicylaldehyde benzoylhydrazone analogs and their transition metal complexes)

IT Intestine, neoplasm
Intestine, neoplasm
(colon, adenocarcinoma, inhibitors; QSAR anal of salicylaldehyde benzoylhydrazone analogs and their transition metal complexes)
IT Antitumor agents
(resistance to; QSAR anal of salicylaldehyde benzoylhydrazone analogs and their transition metal complexes)
IT 959-36-4P 18269-02-8P 260429-51-4P
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); PRP (Properties); RCT (Reactant); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); RACT (Reactant or reagent); USES (Uses)
(QSAR anal of salicylaldehyde benzoylhydrazone analogs and their transition metal complexes)
IT 3232-37-9 5941-05-9
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); PRP (Properties); RCT (Reactant); THU (Therapeutic use); BIOL (Biological study); RACT (Reactant or reagent); USES (Uses)
(QSAR anal of salicylaldehyde benzoylhydrazone analogs and their transition metal complexes)
IT 3232-37-9DP, chromium, cobalt, iron and nickel complexes 7439-89-6DP, Iron, salicylaldehyde benzoylhydrazone complex, biological studies 7440-47-3DP, Chromium, salicylaldehyde benzoylhydrazone complex, biological studies **18176-38-0P** 56679-56-2P 82859-74-3P 127105-10-6P 260561-87-3P 260562-24-1P
RL: **BAC (Biological activity or effector, except adverse)**; **BSU (Biological study, unclassified)**; PRP (Properties); SPN (Synthetic preparation); **THU (Therapeutic use)**; **BIOL (Biological study)**; PREP (Preparation); USES (Uses)
(QSAR anal of salicylaldehyde benzoylhydrazone analogs and their transition metal complexes)
IT 3232-36-8 7440-02-0D, Nickel, salicylaldehyde benzoylhydrazone complex, biological studies 7440-48-4D, Cobalt, salicylaldehyde benzoylhydrazone complex, biological studies 16048-96-7 50366-20-6 50366-22-8 56192-42-8 56679-54-0 56679-55-1 62433-16-3 82859-70-9 82859-72-1 82859-73-2 82859-75-4 82859-76-5 96950-39-9 100622-79-5 100969-61-7 115695-40-4 119341-51-4 126681-61-6 260429-42-3 260429-43-4 260429-44-5 260429-45-6 260429-46-7 260429-47-8 260429-48-9 260429-49-0 260429-50-3 260561-35-1 260561-36-2 260561-37-3 260561-38-4 260561-39-5 260561-40-8 260561-41-9 260561-42-0 260561-43-1 260561-62-4 260561-86-2 260562-09-2 260562-10-5 260562-11-6 260562-12-7 260562-13-8 260562-14-9 260562-15-0 260562-16-1 260562-20-7 260562-21-8 260562-22-9
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(QSAR anal of salicylaldehyde benzoylhydrazone analogs and their transition metal complexes)
IT 15663-27-1, Cisplatin
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(QSAR anal of salicylaldehyde benzoylhydrazone analogs and their transition metal complexes)
IT 772-33-8, 2-Hydroxy-5-nitrobenzyl bromide 936-02-7, Salicylhydrazide 7803-57-8, Hydrazine hydrate 15158-11-9, Copper(II), reactions
RL: RCT (Reactant); RACT (Reactant or reagent)
(QSAR anal of salicylaldehyde benzoylhydrazone analogs and their transition metal complexes)
RE.CNT 38 THERE ARE 38 CITED REFERENCES AVAILABLE FOR THIS RECORD
RE
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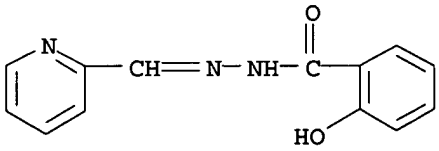
IT **18176-38-0P**
RL: **BAC (Biological activity or effector, except adverse)**; **BSU (Biological study, unclassified)**; PRP (Properties); SPN (Synthetic preparation); **THU (Therapeutic use)**; **BIOL (Biological study)**; PREP (Preparation); USES (Uses)
(QSAR anal of salicylaldehyde benzoylhydrazone analogs and their transition metal complexes)

RN 18176-38-0 HCAPLUS

CN Benzoic acid, 2-hydroxy-, (2-pyridinylmethylene)hydrazide (9CI) (CA INDEX NAME)



L52 ANSWER 5 OF 25 HCAPLUS COPYRIGHT 2005 ACS on STN
AN 2000:42711 HCAPLUS
DN 132:144676
ED Entered STN: 18 Jan 2000
TI The biologically active iron chelators 2-pyridylcarboxaldehyde isonicotinoylhydrazone, 2-pyridylcarboxaldehyde benzoylhydrazone monohydrate and 2-furaldehyde isonicotinoylhydrazone
AU **Richardson, Des R.; Becker, Erika; Bernhardt,**

Paul V.
CS Department of Medicine, Royal Brisbane Hospital, University of Queensland, Brisbane, 4029, Australia
SO Acta Crystallographica, Section C: Crystal Structure Communications (**1999**), C55(12), 2102-2105
CODEN: ACSCEE; ISSN: 0108-2701
PB Munksgaard International Publishers Ltd.
DT Journal
LA English
CC 75-8 (Crystallography and Liquid Crystals)
Section cross-reference(s): 1, 9, 27
AB In the crystal structures of the resp. title compds., C12H10N4O, C13H11N3O·H2O and C11H9N3O2, variations in the torsion angles of the aromatic pyridyl and benzoyl groups are observed, and the disposition of the heterocyclic aldehyde is influenced by the ring size of this group. Crystallog. data are given.
ST mol structure pyridylcarboxaldehyde benzoylhydrazone furaldehyde isonicotinoylhydrazone
IT Crystal structure
Molecular structure
(of pyridylcarboxaldehyde isonicotinoylhydrazone, pyridylcarboxaldehyde benzoylhydrazone monohydrate and furaldehyde isonicotinoylhydrazone)
IT 213013-18-4, 2-Furaldehyde isonicotinoylhydrazone **257299-41-5** **257299-43-7**
RL: BSU (Biological study, unclassified); PRP (Properties); BIOL (Biological study)
(crystal structure of biol. active iron chelator of)
RE.CNT 13 THERE ARE 13 CITED REFERENCES AVAILABLE FOR THIS RECORD
RE
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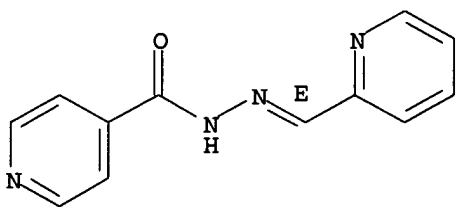
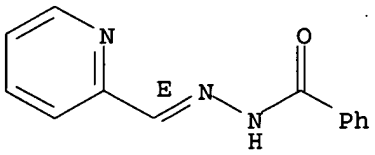
IT **257299-41-5** **257299-43-7**
RL: BSU (Biological study, unclassified); PRP (Properties); BIOL (Biological study)
(crystal structure of biol. active iron chelator of)
RN 257299-41-5 HCAPLUS
CN 4-Pyridinecarboxylic acid, (2E)-(2-pyridinylmethylene)hydrazide, stereoisomer (9CI) (CA INDEX NAME)

Double bond geometry as shown.



RN 257299-43-7 HCAPLUS
CN Benzoic acid, (2E)-(2-pyridinylmethylene)hydrazide, monohydrate (9CI) (CA INDEX NAME)

Double bond geometry as shown.



● H_2O

L52 ANSWER 6 OF 25 HCAPLUS COPYRIGHT 2005 ACS on STN
AN 1999:783045 HCAPLUS
DN 132:246303
ED Entered STN: 10 Dec 1999
TI Development of novel aroylhydrazone ligands for iron chelation therapy: 2-pyridylcarboxaldehyde isonicotinoyl hydrazone analogs
AU **Becker, Erika; Richardson, Des R.**
CS Department of Medicine, Royal Brisbane Hospital, University of Queensland, Brisbane, Australia
SO Journal of Laboratory and Clinical Medicine (**1999**), 134(5), 510-521
CODEN: JLCMAK; ISSN: 0022-2143
PB Mosby, Inc.
DT Journal
LA English
CC 1-12 (Pharmacology)
AB Previous studies have demonstrated that aroylhydrazone iron (Fe) chelators of the pyridoxal isonicotinoyl hydrazone (PIH) class have high Fe chelation efficacy both in vitro and in vivo. Depending on their design, these drugs may have potential as agents for the treatment of Fe overload disease or cancer. Considering the high potential of this class of ligands, we have synthesized seven novel aroylhydrazones in an attempt to identify Fe chelators more efficient than desferrioxamine (DFO) and more soluble than those of the PIH class. These compds. belong to a new series of tridentate chelators known as the 2-pyridylcarboxaldehyde isonicotinoyl hydrazones (PCIH). In this study we have examined the Fe chelation efficacy and antiproliferative activity of these chelators including their effects on the expression of genes (WAF1 and GADD45) known to be important in mediating cell cycle arrest at G1/S. From seven chelators synthesized, three ligands, namely 2-pyridylcarboxaldehyde benzoyl hydrazone (PCBH), 2-pyridylcarboxaldehyde m-bromobenzoyl hydrazone (PCBBH), and 2-pyridylcarboxaldehyde 2-thiophenecarboxyl hydrazone (PCTH), showed greater Fe chelation activity than DFO and comparable or greater efficiency than PIH. These ligands were highly effective at both mobilizing 59Fe from cells and preventing 59Fe uptake from 59Fe-transferrin and caused a marked increase in the RNA-binding activity of the iron-regulatory proteins (IRP). Our studies have also demonstrated that compared with the cytotoxic Fe chelator, 2-hydroxy-1-naphthylaldehyde isonicotinoyl hydrazone (311), these ligands have far less effect on cellular growth and 3H-thymidine, 3H-leucine, or 3H-uridine incorporation. In addition, in contrast to 311, which markedly increased WAF1 and GADD45 mRNA expression, PCBH and PCTH did not have any effect, whereas PCBBH increased the expression of GADD45 mRNA. Collectively, these results demonstrate the potential of several of these ligands as agents for the

management of Fe overload disease.
ST iron chelator pyridoxal isonicotinoyl hydrazone
IT Antitumor agents
Chelating agents
(iron chelation by 2-pyridylcarboxaldehyde isonicotinoyl hydrazone analogs)
IT Transferrins
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(iron chelation by 2-pyridylcarboxaldehyde isonicotinoyl hydrazone analogs)
IT Proteins, specific or class
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(iron-regulatory; iron chelation by 2-pyridylcarboxaldehyde isonicotinoyl hydrazone analogs)
IT 70-51-9, Desferrioxamine 737-86-0, Pyridoxal isonicotinoyl hydrazone
796-42-9 **1215-55-0** 6956-53-2 **15017-32-0**
114011-30-2 158833-85-3 158833-86-4
262421-84-1
RL: ADV (Adverse effect, including toxicity); BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(iron chelation by 2-pyridylcarboxaldehyde isonicotinoyl hydrazone analogs)
IT 7439-89-6, Iron, biological studies
RL: BPR (Biological process); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); PROC (Process); USES (Uses)
(iron chelation by 2-pyridylcarboxaldehyde isonicotinoyl hydrazone analogs)
RE.CNT 52 THERE ARE 52 CITED REFERENCES AVAILABLE FOR THIS RECORD
RE
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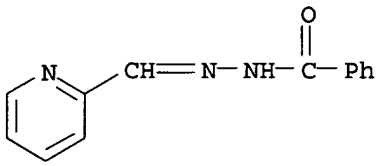
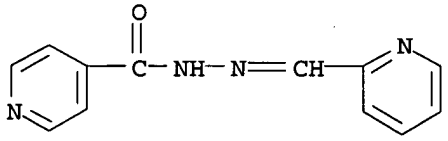
IT **1215-55-0 15017-32-0 114011-30-2**
158833-85-3 158833-86-4 262421-84-1
RL: ADV (Adverse effect, including toxicity); BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(iron chelation by 2-pyridylcarboxaldehyde isonicotinoyl hydrazone analogs)

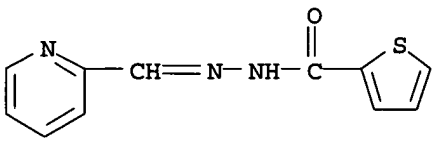
RN 1215-55-0 HCAPLUS
CN Benzoic acid, (2-pyridinylmethylene)hydrazide (9CI) (CA INDEX NAME)



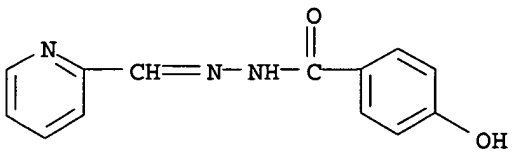
RN 15017-32-0 HCAPLUS
CN 4-Pyridinecarboxylic acid, (2-pyridinylmethylene)hydrazide (9CI) (CA INDEX NAME)



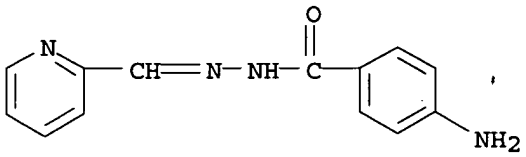
RN 114011-30-2 HCAPLUS
CN 2-Thiophenecarboxylic acid, (2-pyridinylmethylene)hydrazide (9CI) (CA INDEX NAME)



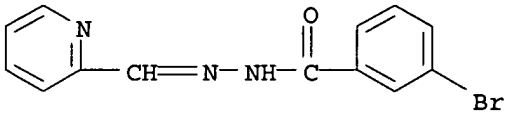
RN 158833-85-3 HCAPLUS
CN Benzoic acid, 4-hydroxy-, (2-pyridinylmethylene)hydrazide (9CI) (CA INDEX NAME)



RN 158833-86-4 HCAPLUS
CN Benzoic acid, 4-amino-, (2-pyridinylmethylene)hydrazide (9CI) (CA INDEX NAME)



RN 262421-84-1 HCAPLUS
CN Benzoic acid, 3-bromo-, (2-pyridinylmethylene)hydrazide (9CI) (CA INDEX NAME)



L52 ANSWER 7 OF 25 HCAPLUS COPYRIGHT 2005 ACS on STN
AN 1999:253739 HCAPLUS
DN 130:325088
ED Entered STN: 26 Apr 1999
TI Preparation of acylhydrazone derivatives as Maillard reaction inhibitors and active oxygen scavengers
IN Inoue, Hitoshi; Horigome, Masato; Kinoshita, Nobuhiro; Shibayama, Toshie
PA Nisshin Flour Milling Co., Ltd., Japan
SO Jpn. Kokai Tokkyo Koho, 80 pp.
CODEN: JKXXAF
DT **Patent**
LA Japanese
IC ICM C07C235-46
ICS A61K031-15; A61K031-165; A61K031-215; A61K031-275; A61K031-31; A61K031-35; A61K031-40; A61K031-44; A61K031-445; A61K031-47; A61K031-495; A61K031-535; C07C235-16; C07C243-38; C07C243-40; C07C251-68; C07C251-76; C07C251-80; C07C251-84
CC 27-14 (Heterocyclic Compounds (One Hetero Atom))
Section cross-reference(s): 1, 25, 28
FAN.CNT 1

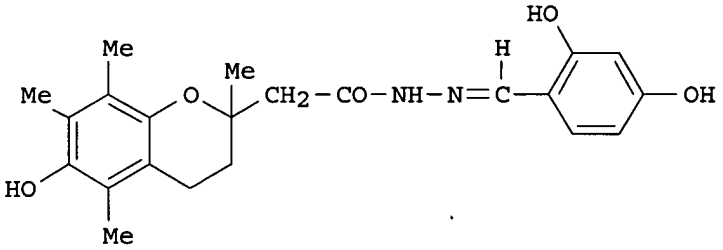
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI JP 11106371	A2	19990420	JP 1998-177222	19980624 <--
PRAI JP 1997-179754	A	19970704 <--		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
JP 11106371	ICM	C07C235-46
	ICS	A61K031-15; A61K031-165; A61K031-215; A61K031-275; A61K031-31; A61K031-35; A61K031-40; A61K031-44; A61K031-445; A61K031-47; A61K031-495; A61K031-535; C07C235-16; C07C243-38; C07C243-40; C07C251-68; C07C251-76; C07C251-80; C07C251-84

OS MARPAT 130:325088

GI



I

AB The title compds. XWY [X = benzene ring, chroman ring, etc.; Y = (un)substituted Ph, etc.; W = CONHN:CH, etc.] are prepared The title compound I in vitro showed IC50 of 4.2 μM against the Maillard reaction.

ST acylhydrazone Maillard reaction inhibitor oxygen scavenger; Maillard reaction inhibitor acylhydrazone prepn; active oxygen scavenger acylhydrazone prepn

IT Peroxidation
(lipid; preparation of acylhydrazone derivs. as Maillard reaction inhibitors and active oxygen scavengers)

IT Lipids, biological studies
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(peroxidn.; preparation of acylhydrazone derivs. as Maillard reaction inhibitors and active oxygen scavengers)

IT Antioxidants
Maillard reaction
(preparation of acylhydrazone derivs. as Maillard reaction inhibitors and active oxygen scavengers)

IT Diabetes mellitus
(preparation of acylhydrazone derivs. as Maillard reaction inhibitors and active oxygen scavengers with effect on diabetic complications)

IT 223720-30-7P 223720-36-3P 223720-40-9P 223720-42-1P 223720-50-1P
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RL: **BAC (Biological activity or effector, except adverse)**; **BSU (Biological study, unclassified)**; SPN (Synthetic preparation); **THU (Therapeutic use)**; **BIOL (Biological study)**; PREP (Preparation); USES (Uses)
(preparation of acylhydrazone derivs. as Maillard reaction inhibitors and active oxygen scavengers)

IT 60-34-4, Methylhydrazine 64-04-0, Phenethylamine 65-85-0, Benzoic acid, reactions 66-72-8, Pyridoxal 69-72-7, Salicylic acid, reactions 75-75-2, Methanesulfonic acid 90-02-8, reactions 90-59-5, 3,5-Dibromosalicylaldehyde 95-01-2, 2,4-Dihydroxybenzaldehyde 97-51-8, 5-Nitrosalicylaldehyde 100-52-7, Benzaldehyde, reactions 123-38-6, Propanal, reactions 148-53-8, o-Vanillin 302-01-2, Hydrazine, reactions 459-57-4, 4-Fluorobenzaldehyde 541-41-3, Ethyl chloroformate 622-33-3, O-Benzylhydroxylamine 932-90-1, α-Benzaldoxime 1421-49-4, 3,5-Di-tert-butyl-4-hydroxybenzoic acid 2039-66-9, 2-Hydroxyphenethylamine 2511-22-0, Methyl 3,5-di-tert-butyl-4-hydroxybenzoate 2905-83-1 3202-96-8 3291-00-7, Salicylaldehyde hydrazone 5470-11-1, Hydroxylamine hydrochloride 6386-38-5 17754-90-4, 4-(Diethylamino)salicylaldehyde 22014-01-3, 3,5-Di-tert-butyl-4-hydroxycinnamic acid 40056-43-7 51084-72-1, o-Vanillin hydrazone 52085-11-7 53101-55-6 53101-57-8 86646-83-5 100863-88-5 223723-56-6 223723-57-7
RL: RCT (Reactant); RACT (Reactant or reagent)
(preparation of acylhydrazone derivs. as Maillard reaction inhibitors and active oxygen scavengers)

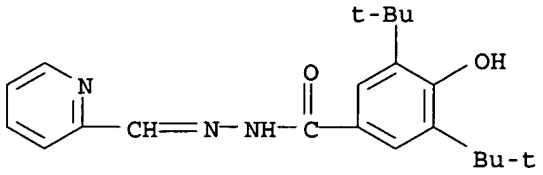
IT 1595-15-9P 2325-01-1P 2874-33-1P 4548-88-3P 5399-68-8P 13466-29-0P 32687-77-7P 42900-04-9P 90223-30-6P 198280-97-6P 223723-46-4P 223723-47-5P 223723-48-6P 223723-49-7P 223723-50-0P 223723-51-1P 223723-53-3P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation of acylhydrazone derivs. as Maillard reaction inhibitors and active oxygen scavengers)

IT **223722-10-9P**
RL: **BAC (Biological activity or effector, except adverse)**; **BSU (Biological study, unclassified)**; SPN (Synthetic preparation);

THU (Therapeutic use); **BIOL (Biological study)**; PREP (Preparation); USES (Uses)
(preparation of acylhydrazone derivs. as Maillard reaction inhibitors and active oxygen scavengers)

RN 223722-10-9 HCAPLUS

CN Benzoic acid, 3,5-bis(1,1-dimethylethyl)-4-hydroxy-, (2-pyridinylmethylene)hydrazide (9CI) (CA INDEX NAME)



L52 ANSWER 8 OF 25 HCAPLUS COPYRIGHT 2005 ACS on STN

AN 1998:719299 HCAPLUS

DN 130:1842

ED Entered STN: 12 Nov 1998

TI Method for the preparation of facial metal tricarbonyl compounds and their use in the labeling of biologically active substrates

IN Alberto, Roger; Schibli, Roger; Egli, Andre

PA Mallinckrodt Medical, Inc., USA

SO PCT Int. Appl., 26 pp.
CODEN: PIXXD2

DT **Patent**

LA English

IC ICM A61K051-04
ICS C01G045-04; C07F013-00

CC 8-9 (Radiation Biochemistry)
Section cross-reference(s): 78

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 9848848	A1	19981105	WO 1998-US7979	19980421 <--
	W: AL, AU, BA, BB, BG, BR, CA, CN, CU, CZ, EE, GE, GW, HU, ID, IL, IS, JP, KP, KR, LC, LK, LR, LT, LV, MG, MK, MN, MX, NO, NZ, PL, RO, SG, SI, SK, SL, TR, TT, UA, US, UZ, VN, YU, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
	RW: GH, GM, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG				
	EP 879606	A1	19981125	EP 1997-201232	19970425 <--
	R: CH, LI, NL				
	CA 2282563	AA	19981105	CA 1998-2282563	19980421 <--
	AU 9871413	A1	19981124	AU 1998-71413	19980421 <--
	AU 748213	B2	20020530		
	BR 9809409	A	20000613	BR 1998-9409	19980421 <--
	EP 1019095	A1	20000719	EP 1998-918501	19980421 <--
	EP 1019095	B1	20020116		
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, NL, SE, PT, IE, FI				
	NZ 337303	A	20001222	NZ 1998-337303	19980421 <--
	AT 211924	E	20020215	AT 1998-918501	19980421 <--
	ES 2168751	T3	20020616	ES 1998-918501	19980421 <--
	PT 1019095	T	20020731	PT 1998-918501	19980421 <--
	NO 9905160	A	19991213	NO 1999-5160	19991022 <--
	US 6344178	B1	20020205	US 1999-403704	19991022 <--
PRAI	EP 1997-201232	A	19970425 <--		
	WO 1998-US7979	W	19980421 <--		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES	
WO 9848848	ICM	A61K051-04	
	ICS	C01G045-04; C07F013-00	
WO 9848848	ECLA	A61K051/04; C01G045/04; C01G057/00; C07B059/00F; C07F013/00B	<--
EP 879606	ECLA	A61K051/04; C01G045/04; C01G057/00; C07B059/00F; C07F013/00B	<--
US 6344178	ECLA	A61K051/08Z; C07F013/00B	<--

AB A method is disclosed for preparing fac-[M(CO)3(OH2)3]+ (M = Mn, 99mTc, 186Re, 188Re) (I) by reacting a metal in the permetallate form with carbon monoxide and a reducing agent, characterized in that a mixture of a base, a reducing agent soluble in water but not substantially decomposed by water, and optionally a stabilizing agent, is solved in a water-containing solvent system containing a solution of the metal in the permanganate, pertechnetate or perrhenate form in the presence of carbon monoxide and optionally in the presence of a halide. Also disclosed are to a method of preparing a labeled compound with the aid of the compound I, a method of direct preparation of labeled compds., a method of labeling of substrates (e.g. amino acids, peptides, proteins, sugars, small receptor binding mols. and body cells) with the aid of compound I, a kit for the preparation of a labeling composition, and a kit for the preparation of a diagnostic of therapeutic pharmaceutical composition

ST facial metal tricarbonyl prepn diagnostic therapeutic

IT Diagnosis
(agents; facial metal tricarbonyl compound preparation and use in labeling of biol. active substrates for diagnosis and therapy)

IT **Chelating agents**
Drug delivery systems
Radiopharmaceuticals
Reducing agents
(facial metal tricarbonyl compound preparation and use in labeling of biol. active substrates for diagnosis and therapy)

IT Receptors
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(ligands; facial metal tricarbonyl compound preparation and use in labeling of biol. active substrates for diagnosis and therapy)

IT Antibodies
RL: RCT (Reactant); RACT (Reactant or reagent)
(monoclonal, reaction; facial metal tricarbonyl compound preparation and use in labeling of biol. active substrates for diagnosis and therapy)

IT Amino acids, reactions
Bases, reactions
Carbohydrates, reactions
Halides
Ligands
Peptides, reactions
Proteins, general, reactions
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction; facial metal tricarbonyl compound preparation and use in labeling of biol. active substrates for diagnosis and therapy)

IT Antibodies
RL: RCT (Reactant); RACT (Reactant or reagent)
(scFv; facial metal tricarbonyl compound preparation and use in labeling of biol. active substrates for diagnosis and therapy)

IT 163932-31-8P 215669-69-5P 215669-75-3P 215669-78-6P
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); RCT (Reactant); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); RACT (Reactant or reagent); USES (Uses)

(facial metal tricarbonyl compound preparation and use in labeling of biol. active substrates for diagnosis and therapy)

IT 66-71-7DP, 1,10-Phenanthroline, technetium-99 complexes 4930-98-7DP, technetium-99 complexes 14133-76-7DP, Tc-99, peptide complexes, biological studies 16598-05-3DP, technetium-99 complexes 25976-65-2DP, technetium-99 complexes 215658-47-2DP, technetium-99 complexes 215658-52-9DP, technetium-99 complexes 215669-79-7P 215669-82-2P 215669-84-4P
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(facial metal tricarbonyl compound preparation and use in labeling of biol. active substrates for diagnosis and therapy)

IT 58-85-5, Biotin
RL: RCT (Reactant); RACT (Reactant or reagent)
(facial metal tricarbonyl compound preparation and use in labeling of biol. active substrates for diagnosis and therapy)

IT 66-71-7, 1,10-Phenanthroline 71-00-1, Histidine, reactions 144-55-8, Sodium bicarbonate, reactions 298-14-6, Potassium bicarbonate 497-19-8, Carbonic acid disodium salt, reactions 584-08-7 630-08-0, Carbon monoxide, reactions **1215-55-0** 1305-62-0, Calcium hydroxide, reactions 1309-42-8, Magnesium hydroxide 1310-58-3, Potassium hydroxide, reactions 1310-73-2, Sodium hydroxide, reactions 4930-98-7 13762-51-1, Potassium borohydride 14333-13-2, Permanganate 16598-05-3 16940-66-2, Sodium borohydride 16949-15-8, Lithium borohydride 16971-29-2, Borohydride 16971-29-2D, Borohydride, derivs. 17611-70-0, Zinc borohydride 23288-61-1, 99Tc-Pertechnetate 25976-65-2 87552-16-7, 186Re-perrhenate 122123-28-8, 188Re-perrhenate 215658-47-2 215658-52-9
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction; facial metal tricarbonyl compound preparation and use in labeling of biol. active substrates for diagnosis and therapy)

IT 141-53-7, Sodium formate 304-59-6, Sodium potassium tartrate, miscellaneous 994-36-5, Sodium citrate
RL: MSC (Miscellaneous)
(stabilizing agent; facial metal tricarbonyl compound preparation and use in labeling of biol. active substrates for diagnosis and therapy)

RE.CNT 8 THERE ARE 8 CITED REFERENCES AVAILABLE FOR THIS RECORD

RE

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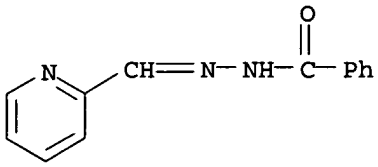
IT **1215-55-0**
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction; facial metal tricarbonyl compound preparation and use in labeling of biol. active substrates for diagnosis and therapy)

RN 1215-55-0 HCAPLUS
CN Benzoic acid, (2-pyridinylmethylene)hydrazide (9CI) (CA INDEX NAME)



L52 ANSWER 9 OF 25 HCAPLUS COPYRIGHT 2005 ACS on STN
AN 1998:541058 HCAPLUS
DN 129:285149
ED Entered STN: 26 Aug 1998
TI Nitrogen, sulfur and oxygen donor adducts with copper(II) complexes of antitumor 2-formylpyridinethiosemicarbazone analogs: physicochemical and cytotoxic studies
AU Ainscough, Eric W.; Brodie, Andrew M.; Denny, William A.; Finlay, Graeme J.; Ranford, John D.
CS Chemistry - Institute of Fundamental Sciences, Massey University, N. Z.
SO Journal of Inorganic Biochemistry (**1998**), 70(3,4), 175-185
CODEN: JIBIDJ; ISSN: 0162-0134
PB Elsevier Science Inc.
DT Journal
LA English
CC 78-7 (Inorganic Chemicals and Reactions)
Section cross-reference(s): **1**
AB The preparation of N-, S- and O-donor ligand adducts with CuX+(HX = 6-methyl-2-formylpyridinethiosemicarbazone (6HL); 2-formylpyridine-2'-methylthiosemicarbazone (2'L); 2-formylpyridine-4'-methylthiosemicarbazone (4'HL)) is described. The N-donors, 2,2'-bipyridyl (bipy), 4-dimethylaminopyridine (dmap) give [Cu(6L)(bipy)]PF6, [Cu(6L)(bipy)]Cl·5H2O, [Cu(4'L)(bipy)]PF6, [Cu(6L)(dmap)2]PF6·2.5 H2O and [Cu(4'L)(dmap)2]PF6·H2O which were characterized by phys. and spectroscopic techniques. Pentafluorothiophenolate (pftp) gives S-donor complexes [CuX(pftp)] (X = 6L and 4'L) and thiolato coordination is proposed from spectroscopic evidence. Paratritylphenolate (ptp) and HPO42- give O-donor complexes [Cu(6L)(ptp)], [Cu(4'L)(ptp)], [{Cu(6L)}2HPO4]·4H2O, and [{Cu(4'L)}2HPO4]·5H2O which were characterized by phys. and spectroscopic techniques, as have the precursor complexes [Cu(6L)(CH3COO)]·H2O, [Cu(4'L)(CH3COO)], [Cu(6HL)(CF3COO)](CF3COO)·0.5H2O, [Cu(4'HL)(CF3COO)](CF3COO), [Cu(2'L)Cl2] and [Cu(2'L)(NO3)2]. Protonation consts. for the ligands and some of their complexes were determined 2-Formylpyridinethiosemicarbazone (HL) complexes of Ag, Au, Zn, Hg, Cd and Pb are discussed and cytotoxicity against the human tumor cell line HCT-8 and antiviral data for selected compds. are presented.
ST transition metal formylpyridinethiosemicarbazone prepn; antitumor activity transition metal formylpyridinethiosemicarbazone complex; antiviral activity copper formylpyridinethiosemicarbazone acetato complex; protonation const copper formylpyridinethiosemicarbazone acetato complex; redn potential copper formylpyridinethiosemicarbazone acetato complex
IT Antitumor agents
Antiviral agents
Reduction potential
IT Protonation
(constant)
IT Molecular structure
(of copper 2-formylpyridinethiosemicarbazone complex)
IT Transition metal complexes
RL: SPN (Synthetic preparation); PREP (Preparation)
(thiosemicarbazone; preparation of 2-formylpyridinethiosemicarbazone

antitumor analogs)
IT Semicarbazones
RL: SPN (Synthetic preparation); PREP (Preparation)
(transition metal thiosemicarbazone complexes; preparation of 2-formylpyridinethiosemicarbazone antitumor analogs)
IT **1215-55-0**, 2-Formylpyridine benzoylhydrazone 213775-36-1
RL: **BAC (Biological activity or effector, except adverse)**; **BSU (Biological study, unclassified)**; **BIOL (Biological study)**
(antitumor activity)
IT 106879-52-1
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); PRP (Properties); BIOL (Biological study)
(antitumor and antiviral activity, cyclic voltammetry and protonation constant)
IT 3608-75-1, 2-Formylpyridinethiosemicarbazone 6839-88-9 6853-69-6, 6-Methyl-2-formylpyridinethiosemicarbazone 51984-11-3
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); PRP (Properties); RCT (Reactant); BIOL (Biological study); RACT (Reactant or reagent)
(complexation with transition metal ions, protonation constant, cyclic voltammetry, and antitumor activity)
IT 771-62-0, Pentafluorothiophenol 978-86-9, 4-Tritylphenol 1122-58-3, 4-Dimethylaminopyridine
RL: RCT (Reactant); RACT (Reactant or reagent)
(for preparation of copper 2-formylpyridinethiosemicarbazone complexes)
IT 213775-07-6P 213775-10-1P 213775-22-5P
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation)
(preparation and antitumor activity)
IT 213774-68-6P
RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)
(preparation and mol. structure)
IT 112340-96-2P 112340-97-3P 213774-56-2P 213774-59-5P 213774-61-9P
213774-64-2P 213774-73-3P 213774-77-7P 213774-82-4P 213774-86-8P
213774-89-1P 213774-92-6P 213774-95-9P 213774-97-1P 213775-01-0P
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213775-28-1P 213775-31-6P
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of)
IT 179938-09-1P 213774-52-8P 213774-99-3P
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); PRP (Properties); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation)
(preparation, antitumor and antiviral activity, cyclic voltammetry and protonation constant)
IT 15189-51-2
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction with 2-formylpyridinethiosemicarbazone)
RE.CNT 45 THERE ARE 45 CITED REFERENCES AVAILABLE FOR THIS RECORD
RE
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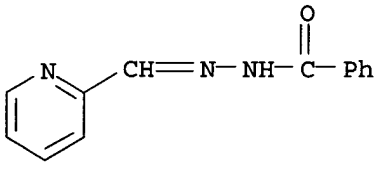
IT **1215-55-0**, 2-Formylpyridine benzoylhydrazone
RL: **BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); BIOL (Biological study)**
(antitumor activity)

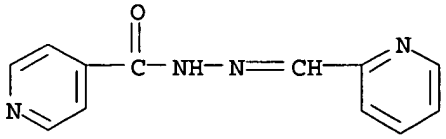
RN 1215-55-0 HCAPLUS

CN Benzoic acid, (2-pyridinylmethylene)hydrazide (9CI) (CA INDEX NAME)

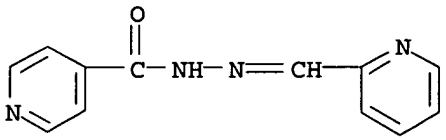


L52 ANSWER 10 OF 25 HCAPLUS COPYRIGHT 2005 ACS on STN
AN 1997:61310 HCAPLUS
DN 126:168980
ED Entered STN: 29 Jan 1997
TI Antitubercular activity of isonicotinoylhydrazone α-pyridinaldehyde and coordination compounds of manganese(II), cobalt(II), nickel(II), copper(II), zinc, and cadmium based on it
AU Tsintsadze, M. G.; Narimanidze, A. P.; Shilakadze, E. M.; Napetvaridze, L. D.; Tsintsadze, T. G.; Chanturiya, M. M.; Kipiani, T. I.
CS Gruz. Tekh. Univ., Georgia
SO Soobshcheniya Akademii Nauk Gruzii (**1995**), 151(2), 287-289

CODEN: SANGEF
PB Nauka
DT Journal
LA Russian
CC 10-5 (Microbial, Algal, and Fungal Biochemistry)
Section cross-reference(s): 1
AB Antitubercular activity of isonicotinoylhydrazone α-pyridine aldehyde and coordination compds. of manganese (II), cobalt (II), nickel (II), copper (II), zinc, and cadmium prepared on its base have been studied in vitro. It is shown that compared with the well-known antitubercular preparation - isonicotine hydrazide (tubazide), the manganic (II) chloride and nickelous (II) sulfate complexed are the most active.
ST tuberculostatic isonicotinoylhydrazone pyridinaldehyde metal coordination compd
IT 54-85-3, Tubazide 7439-96-5D, Manganese, complex with isonicotinoylhydrazone α-pyridinaldehyde and chloride, biological studies 7440-43-9D, Cadmium, complex with isonicotinoylhydrazone α-pyridinaldehyde and sulfate, biological studies 7440-48-4D, Cobalt, complex with isonicotinoylhydrazone α-pyridinaldehyde and chloride, biological studies 7440-66-6D, Zinc, complex with isonicotinoylhydrazone α-pyridinaldehyde and sulfate, biological studies **15017-32-0 15017-32-0D**, complexes with manganese, cobalt, zinc and cadmium 187085-54-7 187085-56-9 187085-58-1 187085-61-6 187085-63-8
RL: **BAC (Biological activity or effector, except adverse)**; **BSU (Biological study, unclassified)**; **THU (Therapeutic use)**; **BIOL (Biological study)**; USES (Uses)
(antitubercular activity of isonicotinoylhydrazone α-pyridinaldehyde and coordination compds. of manganese(II), cobalt(II), nickel(II), copper(II), zinc, and cadmium based on it)
IT **15017-32-0 15017-32-0D**, complexes with manganese, cobalt, zinc and cadmium
RL: **BAC (Biological activity or effector, except adverse)**; **BSU (Biological study, unclassified)**; **THU (Therapeutic use)**; **BIOL (Biological study)**; USES (Uses)
(antitubercular activity of isonicotinoylhydrazone α-pyridinaldehyde and coordination compds. of manganese(II), cobalt(II), nickel(II), copper(II), zinc, and cadmium based on it)
RN 15017-32-0 HCAPLUS
CN 4-Pyridinecarboxylic acid, (2-pyridinylmethylene)hydrazide (9CI) (CA INDEX NAME)



RN 15017-32-0 HCAPLUS
CN 4-Pyridinecarboxylic acid, (2-pyridinylmethylene)hydrazide (9CI) (CA INDEX NAME)



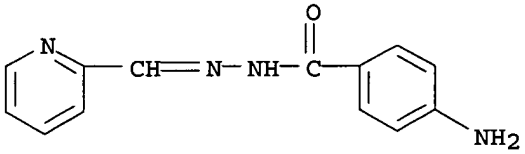
L52 ANSWER 11 OF 25 HCAPLUS COPYRIGHT 2005 ACS on STN
AN 1995:873157 HCAPLUS
DN 123:334700
ED Entered STN: 24 Oct 1995
TI Evaluation of some arylhydrazones of p-aminobenzoic acid hydrazide as antimicrobial agents and the in vitro hepatic microsomal metabolism
AU Komurcu, S. G.; Rollas, S.; Ulgen, M.; Gorrod, J. W.; Cevikbas, A.
CS Faculty of Pharmacy, University of Marmara, Hydarpasa, 81919, Turk.
SO Bollettino Chimico Farmaceutico (**1995**), 134(7), 375-9
CODEN: BCFAAI; ISSN: 0006-6648
PB Societa Editoriale Farmaceutica
DT Journal
LA English
CC 10-5 (Microbial, Algal, and Fungal Biochemistry)
Section cross-reference(s): **1**, 25
AB Benzoic acid p-amino-[(substituted phenyl/pyridyl)methylene] hydrazide derivs. were synthesized by interaction of p-aminobenzoic acid hydrazide with various aromatic aldehydes. The structures of the compds. were elucidated by use of their UV, IR, 1H-NMR and mass spectral data. These compds. were also evaluated for antimicrobial activity. The in vitro hepatic microsomal metabolism of benzoic acid p-amino-[(4-fluorophenyl)methylene]hydrazide, a selected prototype from these compds. was also carried out.
ST arylhydrazone aminobenzoate hydrazide prepn antimicrobial metab
IT Acidity
Bactericides, Disinfectants, and Antiseptics
Fungicides and Fungistats
Liver
Microsome
(evaluation of arylhydrazones of p-aminobenzoic acid hydrazide as antimicrobial agents and in vitro hepatic microsomal metabolism)
IT 170711-65-6P
RL: BAC (Biological activity or effector, except adverse); BPR (Biological process); BSU (Biological study, unclassified); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); PROC (Process); USES (Uses)
(evaluation of arylhydrazones of p-aminobenzoic acid hydrazide as antimicrobial agents and in vitro hepatic microsomal metabolism)
IT 97742-04-6P 97742-08-0P 97742-10-4P **158833-86-4P**
170711-64-5P 170711-66-7P 170711-67-8P
RL: **BAC (Biological activity or effector, except adverse)**; **BSU (Biological study, unclassified)**; SPN (Synthetic preparation); **THU (Therapeutic use)**; **BIOL (Biological study)**; PREP (Preparation); USES (Uses)
(evaluation of arylhydrazones of p-aminobenzoic acid hydrazide as antimicrobial agents and in vitro hepatic microsomal metabolism)
IT 459-57-4, p-Fluorobenzaldehyde
RL: BSU (Biological study, unclassified); MFM (Metabolic formation); BIOL (Biological study); FORM (Formation, nonpreparative)
(evaluation of arylhydrazones of p-aminobenzoic acid hydrazide as antimicrobial agents and in vitro hepatic microsomal metabolism)
IT 5351-17-7, p-Aminobenzoic acid hydrazide
RL: BSU (Biological study, unclassified); MFM (Metabolic formation); RCT (Reactant); BIOL (Biological study); FORM (Formation, nonpreparative); RACT (Reactant or reagent)
(evaluation of arylhydrazones of p-aminobenzoic acid hydrazide as antimicrobial agents and in vitro hepatic microsomal metabolism)
IT 94-09-7, Ethyl p-aminobenzoate 7803-57-8, Hydrazine-hydrate
RL: RCT (Reactant); RACT (Reactant or reagent)
(evaluation of arylhydrazones of p-aminobenzoic acid hydrazide as antimicrobial agents and in vitro hepatic microsomal metabolism)
IT 132256-07-6P 170711-63-4P
RL: SPN (Synthetic preparation); PREP (Preparation)

(evaluation of arylhydrazones of p-aminobenzoic acid hydrazide as antimicrobial agents and in vitro hepatic microsomal metabolism)

IT **158833-86-4P**
RL: **BAC (Biological activity or effector, except adverse)**; **BSU (Biological study, unclassified)**; SPN (Synthetic preparation); **THU (Therapeutic use)**; **BIOL (Biological study)**; PREP (Preparation); USES (Uses)
(evaluation of arylhydrazones of p-aminobenzoic acid hydrazide as antimicrobial agents and in vitro hepatic microsomal metabolism)

RN 158833-86-4 HCAPLUS

CN Benzoic acid, 4-amino-, (2-pyridinylmethylene)hydrazide (9CI) (CA INDEX NAME)



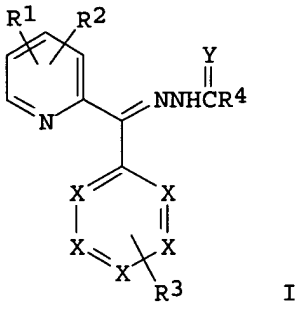
L52 ANSWER 12 OF 25 HCAPLUS COPYRIGHT 2005 ACS on STN
AN 1994:106782 HCAPLUS
DN 120:106782
ED Entered STN: 05 Mar 1994
TI Preparation of pyridyl acylhydrazones as microbicides
IN Heuer, Lutz; Schwamborn, Michael; Erdelen, Christoph; Dehne, Heinz Wilhelm; Berg, Dieter; Endermann, Rainer; Metzger, Karl Georg; Bremm, Klaus Dieter; Ludwig, Georg Wilhelm
PA Bayer A.-G., Germany
SO Ger. Offen., 27 pp.
CODEN: GWXXBX
DT **Patent**
LA German
IC ICM C07D213-53
ICS C07D417-12; C07D413-10; C07D401-12; C07D405-12; C07D521-00; C07D227-04; C07D213-60; A01N047-34; A01N047-24; A01N047-36; A01N047-38
ICI C07D213-53, C07D277-32, C07D213-75, C07D265-30, C07D239-42, C07D251-22, C07D307-14, C07D227-04
CC 27-16 (Heterocyclic Compounds (One Hetero Atom))
Section cross-reference(s): **1**, 5
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI DE 4207400	A1	19930916	DE 1992-4207400	19920309 <--
PRAI DE 1992-4207400		19920309 <--		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
DE 4207400	ICM	C07D213-53
	ICS	C07D417-12; C07D413-10; C07D401-12; C07D405-12; C07D521-00; C07D227-04; C07D213-60; A01N047-34; A01N047-24; A01N047-36; A01N047-38
	ICI	C07D213-53, C07D277-32, C07D213-75, C07D265-30, C07D239-42, C07D251-22, C07D307-14, C07D227-04

OS MARPAT 120:106782
GI



I

AB Title compds. [I; R1-R3 = H, halo, alkyl, haloalkyl, alkoxy, alkoxyalkyl, alkylthio, cycloalkyl, (substituted) Ph; R1R2 = atoms to complete an unsatd. 6-membered ring; R4 = N[(CH2)nR5][(CH2)nR6], S(CH2)nR5, O(CH2)nR5; R5, R6 = H, (substituted) (O, S-, CO-, SO-, SO2-, or imino-interrupted) alkyl, alkenyl, haloalkyl, cycloalkyl, cycloalkenyl, aryl, heteroaryl, etc.; R5R6 = atoms to form a (substituted) (O-, S-, CO-, SO-, SO2-, or imino-substituted) 3-18 membered ring; X = C, N; Y = S, NH; n = 0-10], and salts and complexes thereof, were prepared Thus, 2-benzoylpyridine and 4-phenyl-3-thiosemicarbazide were heated in EtOH to give I (R1-R3 = H, R4 = NHPh, X = C, Y = S). Numerous I were active against Alternaria tenuis, Aspergillus niger, Aureobasidium pullulans, etc., at <200 mg/L. Several I were said to show superior activity against Phaedon cochleariae, Plutella maculipennis, and Heliothis virescens on crop plants.

ST pyridinyl acylhydrazone prepn microbicide; fungicide pyridinyl acylhydrazone; pesticide pyridinyl acylhydrazone; bactericide pyridinyl acylhydrazone

IT Bactericides, Disinfectants, and Antiseptics
Fungicides and Fungistats
Insecticides
Pesticides
(pyridyl acylhydrazones)

IT Fungicides and Fungistats
(agrochem., pyridyl acylhydrazones)

IT **1215-55-0P**
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of, as intermediate for microbicide)

IT 26158-28-1P 65518-40-3P 82130-13-0P 82766-13-0P 85748-43-2P
150314-56-0P 152094-66-1P 152094-67-2P 152094-68-3P 152094-69-4P
152094-70-7P 152094-71-8P 152094-72-9P 152094-73-0P 152094-74-1P
152094-75-2P 152094-76-3P 152094-77-4P 152094-78-5P 152094-79-6P
152094-80-9P 152094-81-0P 152094-82-1P 152094-83-2P 152094-84-3P
152094-85-4P 152094-86-5P 152094-87-6P 152094-88-7P 152094-89-8P
152094-90-1P 152094-91-2P 152094-92-3P 152094-93-4P 152094-94-5P
152094-95-6P 152094-96-7P 152094-97-8P 152094-98-9P 152094-99-0P
152095-00-6P 152095-01-7P 152095-02-8P 152095-03-9P 152095-04-0P
152095-05-1P 152095-06-2P 152095-07-3P 152095-08-4P 152095-09-5P
152095-10-8P 152095-11-9P 152095-12-0P 152095-13-1P 152095-14-2P
152095-15-3P 152095-16-4P 152095-17-5P 152095-18-6P 152095-19-7P
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152095-25-5P 152095-26-6P 152095-27-7P 152095-28-8P 152095-29-9P
152095-30-2P 152095-31-3P 152095-32-4P 152095-33-5P 152095-34-6P
152095-35-7P 152095-36-8P 152095-37-9P 152095-38-0P 152095-39-1P
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152095-45-9P 152095-46-0P 152095-47-1P 152095-48-2P 152095-49-3P
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152095-60-8P 152095-61-9P 152095-62-0P 152095-63-1P 152095-64-2P
152095-65-3P 152095-66-4P 152095-67-5P 152095-68-6P 152095-69-7P

152095-70-0P 152095-71-1P 152095-72-2P 152095-73-3P 152095-74-4P
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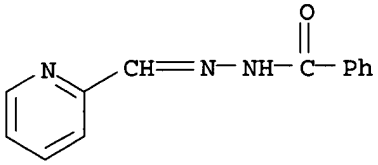
152096-00-9P 152096-01-0P 152096-02-1P 152096-03-2P
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of, as microbicide)

IT 91-02-1, 2-Benzoylpyridine 302-01-2, Hydrazine, reactions 1569-69-3, Cyclohexylmercaptan 5351-69-9, 4-Phenyl-3-thiosemicarbazide 7307-55-3, n-Undecylamine
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction of, in preparation of acylhydrazone microbicide)

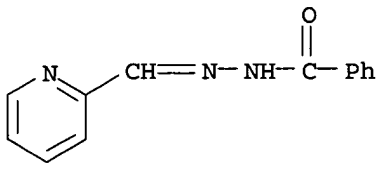
IT **1215-55-0P**
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of, as intermediate for microbicide)

RN 1215-55-0 HCAPLUS
CN Benzoic acid, (2-pyridinylmethylene)hydrazide (9CI) (CA INDEX NAME)



L52 ANSWER 13 OF 25 HCAPLUS COPYRIGHT 2005 ACS on STN
AN 1992:407226 HCAPLUS
DN 117:7226
ED Entered STN: 11 Jul 1992
TI Biologically active thiazolidinone. Part III. Synthesis and fungal toxicities of substituted thiazolidinone, thioether and N-benzoyl heterocyclic compounds from benzoic acid hydrazones
AU Abdel-Rahman, R. M.; El-Gendy, Z.; Fawzy, M. M.; Mahmoud, M. B.
CS Fac. Educ., Ain Shams Univ., Cairo, Egypt
SO Journal of the Indian Chemical Society (**1991**), 68(11), 628-31
CODEN: JICSAH; ISSN: 0019-4522
DT Journal
LA English
CC 21-2 (General Organic Chemistry)
Section cross-reference(s): **1**
AB The title compds were prepared by reactions of benzoylhydrazones with HSCH2CO2H, 4-ClC6H4SH, PhCOCH2COMe, and 2-PhCOC6H4CO2H. Reactions of dibenzoylhydrazones with N2H4·H2O and guanidine hydrochloride were also described. Products such as I and II showed antifungal activity.
ST fungicide thiazolidinone thioether benzoyl heterocycle; benzoyl heterocycle prepn fungicide; thiazolidinone prepn fungicide; thioether prepn fungicide
IT Cyclocondensation reaction
(of benzoylhydrazones with thiols, carbonyl compds. and nitrogen compds.)
IT Addition reaction
(of benzylhydrazones with thiols)
IT Fungicides and Fungistats
(thiazolidinones, thioethers and hydrazones)
IT 106-54-7, p-Chlorobenzenethiol
RL: RCT (Reactant); RACT (Reactant or reagent)
(addition reaction of, with benzoylhdyrazones)
IT 85-52-9, 2-Benzoylbenzoic acid 93-91-4, Benzoylacetone

RL: RCT (Reactant); RACT (Reactant or reagent)
(cyclization reaction of, with benzoylhydrazone)
IT 50-01-1, Guanidine monohydrochloride 302-01-2, Hydrazine, reactions
RL: RCT (Reactant); RACT (Reactant or reagent)
(cyclization reaction of, with dibenzoylhdyrazones)
IT 141736-86-9P 141736-87-0P 141736-88-1P
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation and conversion to heterocycle)
IT 141736-78-9P 141736-79-0P 141736-80-3P 141736-81-4P
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation)
(preparation and fungicidal activity of)
IT **1215-55-0P** 22233-86-9P 22454-54-2P 25642-37-9P 39575-07-0P 39575-26-3P 62214-31-7P 109352-09-2P 113143-39-8P 141736-71-2P 141736-72-3P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation and reaction with thiols)
IT 30082-73-6P 113367-87-6P 141736-73-4P 141736-74-5P 141736-75-6P 141736-76-7P 141736-77-8P 141736-82-5P 141736-83-6P 141736-84-7P 141736-85-8P 141736-89-2P 141736-90-5P 141736-91-6P 141736-92-7P
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of)
IT 28123-77-5P
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation, fungicidal activity and reactions of)
IT 68-11-1, Thioglycolic acid, reactions
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction of, with benzoylhydrazones)
IT 613-94-5, Benzoic hydrazide
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction of, with carbonyl compds.)
IT **1215-55-0P**
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation and reaction with thiols)
RN 1215-55-0 HCAPLUS
CN Benzoic acid, (2-pyridinylmethylene)hydrazide (9CI) (CA INDEX NAME)



L52 ANSWER 14 OF 25 HCAPLUS COPYRIGHT 2005 ACS on STN
AN 1987:477634 HCAPLUS
DN 107:77634
ED Entered STN: 05 Sep 1987
TI Anthelmintic pyridinyl acylhydrazones
IN Rector, Douglas L.; Conder, George A.; Folz, Sylvester D.
PA Upjohn Co., USA
SO PCT Int. Appl., 131 pp.
CODEN: PIXXD2
DT **Patent**
LA English
IC C07D213-53; C07D213-89; C07D405-12; C07D405-06; C07D213-61
CC 27-16 (Heterocyclic Compounds (One Hetero Atom))

Section cross-reference(s): **1**, 5

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 8604582	A1	19860814	WO 1986-US72	19860123 <--
	W: AU, DK, JP, US				
	RW: AT, BE, CH, DE, FR, GB, IT, LU, NL, SE				
	AU 8653585	A1	19860826	AU 1986-53585	19860123 <--
	AU 582214	B2	19890316		
	EP 214158	A1	19870318	EP 1986-900935	19860123 <--
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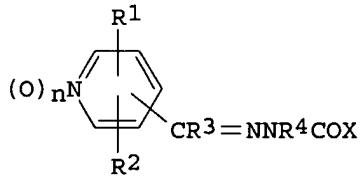
PRAI	US 1985-700375	A	19850211 <--		
	US 1985-715425	A	19850325 <--		
	WO 1986-US72	A	19860123 <--		
	US 1986-934575	A1	19861003 <--		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES		
WO 8604582	IC	C07D213-53IC	C07D213-89IC	C07D405-12IC
		C07D405-06IC	C07D213-61	

GI



I

AB Anthelmintic pyridinyl acylhydrazones I (R1, R2 = H, OH, alkyl, alkoxy, alkylthio, halo, CF3; R3, R4 = H, alkyl, (un)substituted cycloalkyl, Ph, phenalkyl; R3 may also be 1,3-dioxacyclohexan-5-yl; X = H, (un)substituted alkyl, Ph, cycloalkyl, pyrrolidinyl, piperidinyl, heteroarom., naphthyl; n = 0, 1) (>400 compds.) are prepared Thus, benzhydrazole was treated with 2-acetylpyridine to give 64% I (n = 0, R1 = R2 = R4 = H, R3 = Me, X = Ph, pyridinyl group is 2-substituted). All compds. were tested for anthelmintic activity in sheep; at 100 mg/kg orally, I (n = 0, R1 = R2 = R4 = H, R3 = Me, X = 4-EtOC6H4, pyridinyl group is 4-substituted) gave 94.6% clearance of adult worms (Haemonchus contortus).

ST pyridinyl acylhydrazone anthelmintic sheep; hydrazone pyridinyl anthelmintic sheep

IT Anthelmintics
((pyridinylalkylidene)acylhydrazones)

IT Sheep
(anthelmintics for, (pyridinylalkylidene)acylhydrazones as)

IT Hydrazones
RL: SPN (Synthetic preparation); PREP (Preparation)
(acyl, pyridinylalkylidene, preparation of, as anthelmintics)

IT 1088-98-8P 1094-39-9P 1094-42-4P 1094-44-6P 1097-01-4P
1097-02-5P 1215-53-8P **1215-55-0P** 1219-42-7P 1507-93-3P
13025-99-5P **15017-32-0P** 19011-97-3P 25445-85-6P
58809-86-2P **58809-89-5P** 65413-30-1P 81291-66-9P
83710-34-3P 85748-62-5P **88053-38-7P** 91803-29-1P

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RL: **BAC (Biological activity or effector, except adverse)**;
BSU (Biological study, unclassified); SPN (Synthetic preparation);
THU (Therapeutic use); **BIOL (Biological study)**; PREP
(Preparation); USES (Uses)
(preparation and anthelmintic activity of)

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RL: **BAC (Biological activity or effector, except adverse)**;
BSU (Biological study, unclassified); SPN (Synthetic preparation);
THU (Therapeutic use); **BIOL (Biological study)**; PREP
(Preparation); USES (Uses)
(preparation and anthelmintic activity of)

IT 109374-07-4
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction of, with benzoyl chloride)

IT 55676-22-7 78790-82-6
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction of, with hydrazide)

IT 872-85-5 1017-24-9 1122-54-9, 4-Acetylpyridine 1122-62-9,
2-Acetylpyridine 1570-48-5 1701-69-5, 4-Propionylpyridine 1701-73-1
14548-46-0, 4-Benzoylpyridine 27049-45-2 36357-38-7 85727-04-4
109374-11-0 109415-00-1
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction of, with hydrazides)

IT 6952-93-8
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction of, with pyridinyl ketones)

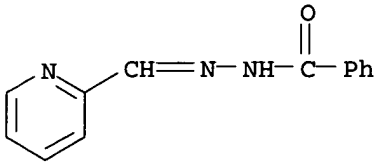
IT 1701-69-5, 4-Propionylpyridine 2402-96-2, 4-Acetylpyridine 1-oxide
79251-07-3
RL: RCT (Reactant); RACT (Reactant or reagent)
(reactions of, with hydrazides)

IT 339-59-3, 4-Trifluoromethylbenzhydrazide 553-53-7, Nicotinic acid
hydrazide 613-94-5, Benzhydrazide 624-84-0, Formyl hydrazine
636-97-5, p-Nitrobenzhydrazide 870-46-2, tert-Butylcarbazate
1068-57-1, Acetic acid hydrazide 2381-77-3 3403-23-4, Benzhydryl
carbazate 3538-65-6, Butyric acid hydrazide 4114-31-2, Ethyl carbazate
5331-43-1, Benzyl carbazate 6294-89-9, Methyl carbazate 7466-54-8,
2-Methoxybenzhydrazide 7658-80-2 21391-40-2, 1-Menthyl carbazate
22227-25-4 38941-47-8, Cyclohexanecarboxylic acid hydrazide
43038-37-5, 2-Phenoxybenzhydrazide 52709-73-6, Butyl carbazate
63884-38-8 98069-56-8, Cyclobutanecarboxylic acid hydrazide
109374-08-5, Phenyl carbazate hydrochloride 109374-10-9

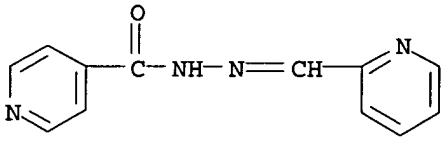
RL: RCT (Reactant); RACT (Reactant or reagent)
(reactions of, with pyridinyl ketones)

IT **1215-55-0P 15017-32-0P 58809-89-5P**
88053-38-7P 109352-39-8P 109372-64-7P
109372-67-0P
RL: **BAC (Biological activity or effector, except adverse)**; **BSU (Biological study, unclassified)**; SPN (Synthetic preparation); **THU (Therapeutic use)**; **BIOL (Biological study)**; PREP (Preparation); USES (Uses)
(preparation and anthelmintic activity of)

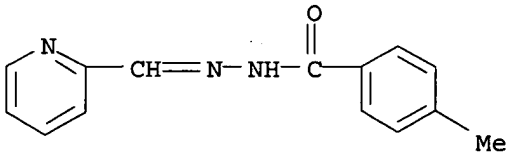
RN 1215-55-0 HCAPLUS
CN Benzoic acid, (2-pyridinylmethylene)hydrazide (9CI) (CA INDEX NAME)



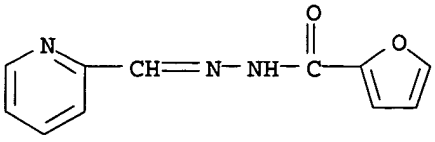
RN 15017-32-0 HCAPLUS
CN 4-Pyridinecarboxylic acid, (2-pyridinylmethylene)hydrazide (9CI) (CA INDEX NAME)



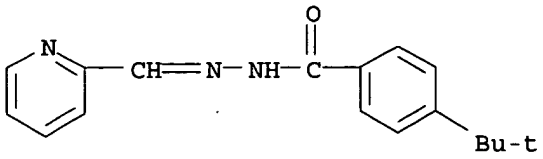
RN 58809-89-5 HCAPLUS
CN Benzoic acid, 4-methyl-, (2-pyridinylmethylene)hydrazide (9CI) (CA INDEX NAME)



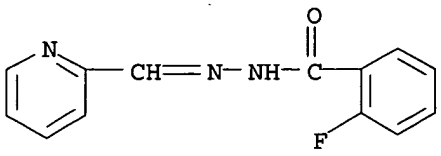
RN 88053-38-7 HCAPLUS
CN 2-Furancarboxylic acid, (2-pyridinylmethylene)hydrazide (9CI) (CA INDEX NAME)



RN 109352-39-8 HCAPLUS
CN Benzoic acid, 4-(1,1-dimethylethyl)-, (2-pyridinylmethylene)hydrazide (9CI) (CA INDEX NAME)



RN 109372-64-7 HCAPLUS
CN Benzoic acid, 2-fluoro-, (2-pyridinylmethylene)hydrazide (9CI) (CA INDEX NAME)



RN 109372-67-0 HCAPLUS
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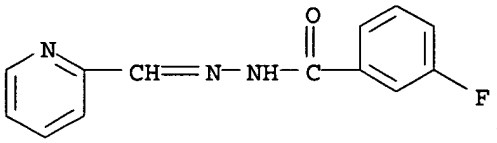


L52 ANSWER 15 OF 25 HCAPLUS COPYRIGHT 2005 ACS on STN
AN 1985:106252 HCAPLUS
DN 102:106252
ED Entered STN: 06 Apr 1985
TI The effect of various chelating agents on the mobilization of iron from reticulocytes in the presence and absence of pyridoxal isonicotinoyl hydrazone
AU Ponka, Prem; Grady, Robert W.; Wilczynska, Ania; Schulman, Herbert M.
CS Div. Hematol., Montreal Gen. Hosp., Montreal, QC, Can.
SO Biochimica et Biophysica Acta (**1984**), 802(3), 477-89
CODEN: BBACAQ; ISSN: 0006-3002
DT Journal
LA English
CC 1-12 (**Pharmacology**)
AB Various chelating agents were tested for their ability to effect the mobilization of iron from reticulocytes by pyridoxal isonicotinoyl hydrazone (PIH) [737-86-0]. They fall into several groups. The largest group included chelators such as citrate [77-92-9], ethylenediaminetetracetic acid [60-00-4], and desferrioxamine [70-51-9], which failed to affect PIH-induced iron mobilization and did not mobilize iron per se. Either these chelators did not enter reticulocytes or they did not take up iron from PIH-Fe complexes. The second group included chelators such as 2,2'-bipyridine [366-18-7], 1,10-phenanthroline [66-71-7], bathophenanthroline sulfonate [40795-59-3] and N,N'-ethylenebis(o-hydroxyphenylglycine) [1170-02-1] which inhibited PIH-induced iron mobilization from reticulocytes and, when added together with PIH, induced radioiron accumulation in an alc.-soluble fraction of reticulocytes. It appears that these chelators enter the cell and compete with PIH for 59Fe(II), but having bound iron are unable to cross the cell

membrane. Spectral anal. suggested that Fe(II) chelators such as 2,2'-bipyridine and 1,10-phenanthroline removed iron from Fe(II)PIH but were not able to do so from Fe(III)PIH. Compds. such as 2,3-dihydroxybenzoic acid [303-38-8] and catechol [120-80-9] potentiated PIH-induced iron mobilization although they were unable to mobilize iron from reticulocytes by themselves. There was a group of miscellaneous compds. which included chelators that either potentiated the iron-mobilizing effect of PIH as well as mobilizing iron from reticulocytes by themselves (tropolone [533-75-5]), or that reduced PIH-induced iron mobilization while themselves having an iron-mobilizing effect (N,N'-bis(2,3-dihydroxybenzoyl)-1,6-diaminohexane) [139-13-9]. In further expts., heme was found to stimulate globin synthesis in reticulocytes, the heme synthesis of which was inhibited by PIH, suggesting that PIH is probably not toxic to the cells.

ST reticulocyte iron mobilization chelating agent; pyridoxal isonicotinoylhydrazone reticulocyte iron

IT **Chelating agents**
(iron mobilization from reticulocyte response to, pyridoxal isonicotinoyl hydrazone in relation to)

IT Reticulocyte
(iron mobilization from, chelating agents effect on, pyridoxal isonicotinoyl hydrazone in relation to)

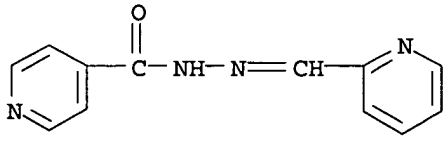
IT 737-86-0
RL: BIOL (Biological study)
(iron mobilization from reticulocyte response to chelating agents in relation to)

IT 60-00-4, biological studies 66-71-7 67-43-6 70-51-9 77-92-9, biological studies 89-73-6 93-62-9 98-98-6 115-41-3 120-80-9, biological studies 139-13-9 303-38-8 366-18-7 501-30-4 533-75-5 569-42-6 917-23-7 1170-02-1 1200-00-6 2411-83-8 3608-75-1 3814-80-0 7377-03-9 13025-99-5 13254-09-6 15017-26-2 **15017-32-0** 18928-00-2 20073-95-4 31181-43-8 39050-26-5 40795-59-3 82647-26-5 90044-13-6 90044-17-0 93086-96-5 95014-65-6 95014-66-7
RL: **BIOL (Biological study)**
(iron mobilization from reticulocyte response to pyridoxal isonicotinoyl hydrazone in relation to)

IT **15017-32-0**
RL: **BIOL (Biological study)**
(iron mobilization from reticulocyte response to pyridoxal isonicotinoyl hydrazone in relation to)

RN 15017-32-0 HCAPLUS

CN 4-Pyridinecarboxylic acid, (2-pyridinylmethylene)hydrazide (9CI) (CA INDEX NAME)



L52 ANSWER 16 OF 25 HCAPLUS COPYRIGHT 2005 ACS on STN

AN 1976:587788 HCAPLUS

DN 85:187788

ED Entered STN: 12 May 1984

TI Composition for modifying the maturation of sugar cane

IN Nickell, Louis G.

PA Hawaiian Development Co., USA

SO Braz. Pedido PI, 34 pp.
CODEN: BPXXDX

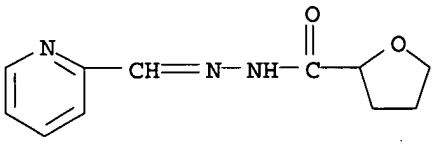
DT **Patent**
LA Portuguese
IC A01N005-00
CC 5-3 (Agrochemicals)
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI BR 7502085		19760121		<--
PRAI US 1974-458430		19740405 <--		

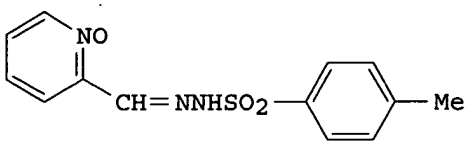
CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
BR 7502085	IC	A01N005-00

AB Furoic hydrazides and derivs. promoted ripening in sugarcane. Tetrahydrofuroic hydrazide [59293-11-7] treatment produced a juice purity of 79.11% and a pol. % of 10.57 in comparison with 72.96 and 7.95, resp., in the untreated controls.
ST furoate hydrazide sugarcane ripening
IT Sugarcane
(furoic hydrazides and derivs., as ripening agents for)
IT 696-59-3 2008-49-3 5428-37-5 59293-11-7 60943-68-2 60943-69-3
60943-70-6 60943-71-7 60943-72-8 60943-73-9 60943-74-0
60943-75-1 60943-76-2 **60943-77-3** 60943-78-4 60943-79-5
60943-80-8 60943-81-9 60943-82-0 60943-83-1 60943-84-2
RL: **BIOL (Biological study)**
(ripening agent for sugarcane)
IT **60943-77-3**
RL: **BIOL (Biological study)**
(ripening agent for sugarcane)
RN 60943-77-3 HCAPLUS
CN 2-Furancarboxylic acid, tetrahydro-, (2-pyridinylmethylene)hydrazide (9CI) (CA INDEX NAME)



L52 ANSWER 17 OF 25 HCAPLUS COPYRIGHT 2005 ACS on STN
AN 1976:400190 HCAPLUS
DN 85:190
ED Entered STN: 12 May 1984
TI Antineoplastic and biochemical properties of arylsulfonylhydrazones of 2-formylpyridine N-oxide
AU Sartorelli, Alan C.; Agrawal, Krishna C.; Booth, Barbara A.; Pittman, James; Bartholomew, David G.; Broom, Arthur D.
CS Sch. Med., Yale Univ., New Haven, CT, USA
SO Journal of Medicinal Chemistry (**1976**), 19(6), 830-3
CODEN: JMCMAR; ISSN: 0022-2623
DT Journal
LA English
CC 1-3 (Pharmacodynamics)
Section cross-reference(s): 27
OS CASREACT 85:190
GI



I

AB Of 7 title compds., prepared by the reaction of pyridine-2-carboxaldehyde [1121-60-4] with the appropriate sulfonyl hydrazide followed by oxidation, or reaction of 2-formylpyridine N-oxide [7216-40-2] with various arylsulfonyl hydrazides, 1-oxidopyridine-2-carboxaldehyde p-toluenesulfonylhydrazone (I) [50908-22-0] was among the most active, increasing the survival time of mice bearing Sarcoma 180 more than 3-fold. I was active against a broad spectrum of transplanted tumors, including Hepatoma 129, Ehrlich carcinoma, and leukemia L1210. Replacement of the pyridine ring with benzene (2 compds.), quinoline (1 compound), or isoquinoline (1 compound) resulted in loss of activity. Movement of the formylhydrazone side chain from the 2 to the 3 or 4 positions of the N-oxide produced inactive compds., and the pyridine N-oxide function was essential except for 4-substituted derivs. Replacement of the SO2 group by CO resulted in complete loss of activity, whereas a C could be inserted between the SO2 and the aryl ring with retention of potency. I caused inhibition of labeled thymidine [50-89-5] and uridine [58-96-8] incorporation into DNA and RNA, resp., of Sarcoma 180 cells.

ST neoplasm inhibitor formylpyridine oxide arylsulfonylhydrazone

IT Neoplasm inhibitors
(2-formylpyridine N-oxide arylsulfonylhydrazones)

IT Molecular structure-biological activity relationship
(neoplasm inhibiting, of 2-formylpyridine N-oxide arylsulfonylhydrazones)

IT Deoxyribonucleic acids
RL: BIOL (Biological study)
(thymidine incorporation into Sarcoma 180, 2-formylpyridine N-oxide arylsulfonylhydrazones inhibition of)

IT Ribonucleic acids
RL: BIOL (Biological study)
(uridine incorporation into Sarcoma 180, 2-formylpyridine N-oxide arylsulfonylhydrazones inhibition of)

IT 50-89-5, biological studies
RL: BIOL (Biological study)
(DNA of neoplasm incorporation of, 2-formylpyridine N-oxide arylsulfonylhydrazones inhibition of)

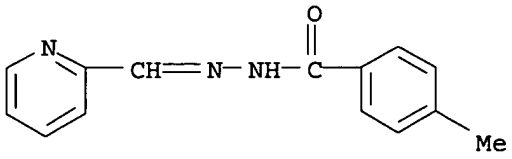
IT 58-96-8
RL: BIOL (Biological study)
(RNA of neoplasm incorporation of, 2-formylpyridine N-oxide arylsulfonylhydrazones inhibition of)

IT 1121-60-4 7216-40-2
RL: BIOL (Biological study)
(condensation of, with hydrazine derivative)

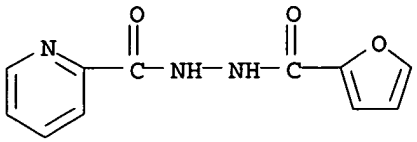
IT 1666-17-7P 18708-54-8P 19350-76-6P 22353-29-3P 50908-22-0P
58809-80-6P 58809-81-7P 58809-82-8P 58809-83-9P 58809-84-0P
58809-85-1P 58809-86-2P 58809-87-3P 58809-88-4P **58809-89-5P**
58809-90-8P 58809-91-9P 58809-92-0P
RL: **BAC (Biological activity or effector, except adverse)**; **BSU (Biological study, unclassified)**; SPN (Synthetic preparation); **BIOL (Biological study)**; PREP (Preparation)
(preparation and neoplasm inhibiting activity of)

IT **58809-89-5P**
RL: **BAC (Biological activity or effector, except adverse)**; **BSU (Biological study, unclassified)**; SPN (Synthetic preparation); **BIOL (Biological study)**; PREP (Preparation)
(preparation and neoplasm inhibiting activity of)

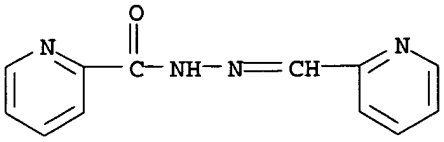
RN 58809-89-5 HCAPLUS
CN Benzoic acid, 4-methyl-, (2-pyridinylmethylene)hydrazide (9CI) (CA INDEX NAME)



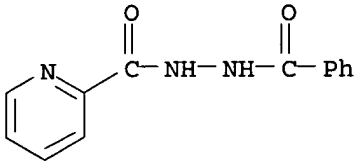
L52 ANSWER 18 OF 25 HCAPLUS COPYRIGHT 2005 ACS on STN
AN 1975:527290 HCAPLUS
DN 83:127290
ED Entered STN: 12 May 1984
TI 1-Heteroyl-2-aroylhydrazines and their cyclization products and their effect on phytopathogenic fungi
AU Nesynov, E. P.; Granin, E. F.; Charuiskaya, L. P.
CS Inst. Org. Khim., Kiev, USSR
SO Fiziologicheski Aktivnye Veshchestva (1966-1992) (**1975**), 7, 72-5
CODEN: FAVUAI; ISSN: 0533-1153
DT Journal
LA Russian
CC 5-2 (Agrochemicals)
GI For diagram(s), see printed CA Issue.
AB Thirtynine title compds. RCONHNHCOR1 and I (R = α- and β-pyridyl, Ph or α-furyl; R1 = aryl or heterocyclic radical) and 13 related compds. tested in greenhouse were less effective than zineb and benlate stds. I(R = α-pyridyl; R1 = α-C10H7) [56352-66-0] and I(R= β-pyridyl; R1 = Ph) [41125-77-3] were the most effective against wheat stalk rust; however the former was phytotoxic. II [21398-08-3] was the most effective against tomato Phytophthora.
ST heteroylaroylhydrazine fungicide; hydrazine fungicide; oxadiazole heterylaryl fungicide
IT Molecular structure-biological activity relationship
(fungicidal, of heteroylaroylhydrazines and their cyclization products)
IT Fungicides and Fungistats
(heteroylaroylhydrazines and heterylaryloxadiazoles)
IT 60-10-6 74-11-3 79-19-6 85-01-8, biological studies 99-94-5 140-22-7 840-78-8 844-23-5 852-38-0 3641-13-2 6301-56-0 17336-46-8 21398-08-3 25412-10-6 41125-77-3 56352-65-9 56352-66-0 **56352-70-6** 56352-71-7 56352-72-8 56352-73-9 56352-74-0 56352-75-1 56352-76-2 56352-77-3 56352-78-4 56352-79-5 56352-80-8 56352-81-9 56352-82-0 56352-83-1 56352-84-2 56352-85-3 56352-86-4 56352-87-5 56352-88-6 56352-89-7 56352-90-0 56352-91-1 56352-92-2 56352-93-3 56352-94-4 56352-95-5 56352-96-6 56352-97-7 56352-98-8 56352-99-9 56353-00-5 56353-01-6 56353-02-7 56396-14-6
RL: AGR (Agricultural use); **BAC (Biological activity or effector, except adverse)**; **BSU (Biological study, unclassified)**; **BIOL (Biological study)**; USES (Uses)
(fungicide)
IT **56352-70-6**
RL: AGR (Agricultural use); **BAC (Biological activity or effector, except adverse)**; **BSU (Biological study, unclassified)**; **BIOL (Biological study)**; USES (Uses)
(fungicide)
RN 56352-70-6 HCAPLUS
CN 2-Pyridinecarboxylic acid, 2-(2-furanylcarbonyl)hydrazide (9CI) (CA INDEX NAME)



L52 ANSWER 19 OF 25 HCAPLUS COPYRIGHT 2005 ACS on STN
AN 1975:132761 HCAPLUS
DN 82:132761
ED Entered STN: 12 May 1984
TI Antitumor activity of some acylhydrazines
AU Rutner, Herman; Lewin, Nathan; Woodbury, E. C.; McBride, Tom J.; Rao, Koppaka V.
CS John L. Smith Mem. Cancer Res., Chas. Pfizer and Co., Inc., Maywood, NJ, USA
SO Cancer Chemotherapy Reports, Part 1 (**1974**), 58(6), 803-11
CODEN: CCROBU; ISSN: 0576-6559
DT Journal
LA English
CC 1-3 (Pharmacodynamics)
GI For diagram(s), see printed CA Issue.
AB When 51 analogs of 1-acetyl-2-picolinoylhydrazine (I) [17433-31-7] were prepared and tested in the Walker 256 carcinosarcoma system, it was shown that the picolinic acid residue in I could be replaced by other residues such as pipecolic, pyrazinoic, benzoic, and several substituted benzoic acid residues with partial retention of activity. In addition, the Ac group could be absent altogether or replaced by selective acyl groups without loss of activity. None the analogs of I had activity in the sarcoma 180 or L1210 leukemia systems.
ST acylhydrazine antitumor activity; picolinoylhydrazine analog antitumor activity
IT Neoplasm inhibitors
(acylhydrazines)
IT Molecular structure-biological activity relationship
(neoplasm inhibiting, of acylhydrazines)
IT 54-85-3 553-53-7 613-94-5 768-05-8 840-79-9 1005-02-3
1068-57-1 1078-38-2 1452-63-7 3148-73-0 5055-39-0 5382-44-5
7254-31-1 14331-27-2 **15017-24-0** 17433-31-7 20349-50-2
22815-97-0 22816-00-8 25433-37-8 28864-26-8 34955-20-9
54570-98-8 54570-99-9 54571-00-5 54571-01-6 54571-02-7
54571-03-8 54571-04-9 54571-05-0 54571-06-1 54571-07-2
54571-08-3 54571-09-4 54571-10-7 54571-11-8 54571-12-9
54571-13-0 54571-14-1 54571-15-2 54571-16-3 54571-17-4
54571-18-5 54571-19-6 54571-20-9 54571-21-0 54571-22-1
54571-23-2 54571-24-3 54571-25-4 54633-17-9
RL: **BAC (Biological activity or effector, except adverse)**; **BSU (Biological study, unclassified)**; **THU (Therapeutic use)**; **BIOL (Biological study)**; USES (Uses)
(neoplasm inhibitor)
IT **15017-24-0 54571-23-2**
RL: **BAC (Biological activity or effector, except adverse)**; **BSU (Biological study, unclassified)**; **THU (Therapeutic use)**; **BIOL (Biological study)**; USES (Uses)
(neoplasm inhibitor)
RN 15017-24-0 HCAPLUS
CN 2-Pyridinecarboxylic acid, (2-pyridinylmethylene)hydrazide (9CI) (CA INDEX NAME)

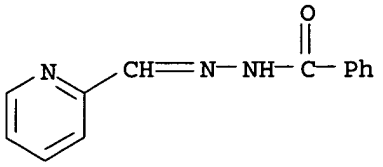


RN 54571-23-2 HCAPLUS
CN 2-Pyridinecarboxylic acid, 2-benzoylhydrazide (9CI) (CA INDEX NAME)

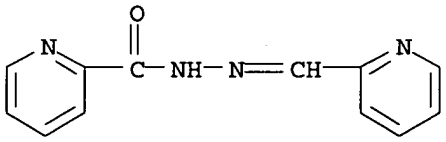


L52 ANSWER 20 OF 25 HCAPLUS COPYRIGHT 2005 ACS on STN
AN 1967:98544 HCAPLUS
DN 66:98544
ED Entered STN: 12 May 1984
TI Thin-layer chromatography of chelating agents. VII. Isonicotinoyl hydrazide-related compounds and related hydrazones
AU Nishimoto, Yukio; Toyoshima, Shoji
CS Eisai Co., Ltd., Tokyo, Japan
SO Yakugaku Zasshi (**1967**), 87(1), 27-32
CODEN: YKKZAJ; ISSN: 0031-6903
DT Journal
LA Japanese
CC 64 (**Pharmaceutical** Analysis)
AB cf. CA 66, 73125s. Compds. related to isonicotinoyl hydrazide (I) and their hydrazones show tailing in thin-layer chromatography when using oridinary silica gel. This tailing is probably due to formation of chelate compds. during development by reaction with trace metals in the adsorbent; but since the stability of such metal chelates is far smaller than that of organic analytical reagents, this tailing is only weak. In order to prevent this tailing, the adsorbent was treated with EDTA and a good result was obtained. Detection of these compds. after development is made by Fe(III)-2,2'-bipyridyl and by citric acid reagent solution I was detected by the former reagent at >0.5 γ. Examns. were also carried out on the separatory detection of related compds.
ST ISONICOTINOYL HYDRAZIDES CHROMATOG; CHROMATOG ISONICOTINOYL HYDRAZIDES; HYDRAZIDES CHROMATOG; HYDRAZONES CHROMATOG
IT 15017-12-6
RL: ANST (Analytical study)
(cc-hydrazides)
IT 54-85-3, analysis 495-84-1 553-53-7 613-94-5 796-42-9 1152-31-4
1215-53-8 **1215-55-0** 1452-63-7 1507-93-3 2845-81-0
3232-37-9 4241-73-0 4329-75-3 4813-03-0 4813-04-1 6419-33-6
13025-99-5 14397-24-1 15017-13-7 15017-21-7 15017-22-8
15017-23-9 **15017-24-0** 15017-25-1 15017-26-2
15017-27-3 15017-28-4 15017-29-5 15017-31-9
15017-32-0 15075-87-3 20842-45-9
RL: ANT (Analyte); ANST (Analytical study)
(chromatog. of)
IT **1215-55-0 15017-24-0 15017-27-3**
15017-32-0
RL: ANT (Analyte); ANST (Analytical study)
(chromatog. of)
RN 1215-55-0 HCAPLUS

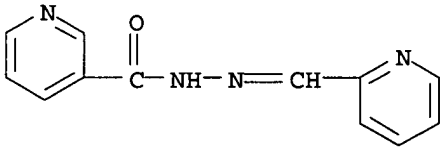
CN Benzoic acid, (2-pyridinylmethylene)hydrazide (9CI) (CA INDEX NAME)



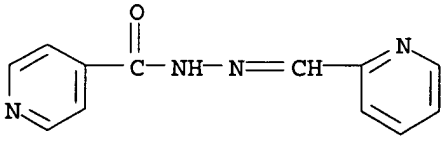
RN 15017-24-0 HCAPLUS
CN 2-Pyridinecarboxylic acid, (2-pyridinylmethylene)hydrazide (9CI) (CA INDEX NAME)



RN 15017-27-3 HCAPLUS
CN 3-Pyridinecarboxylic acid, (2-pyridinylmethylene)hydrazide (9CI) (CA INDEX NAME)

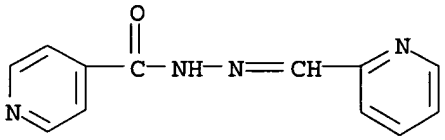


RN 15017-32-0 HCAPLUS
CN 4-Pyridinecarboxylic acid, (2-pyridinylmethylene)hydrazide (9CI) (CA INDEX NAME)



L52 ANSWER 21 OF 25 HCAPLUS COPYRIGHT 2005 ACS on STN
AN 1961:44634 HCAPLUS
DN 55:44634
OREF 55:8659b-c
ED Entered STN: 22 Apr 2001
TI Mechanism of action of drugs causing myoneural block and their antagonists
AU Huidobro, F.
CS Univ. Catolica Chile, Santiago
SO Arzneimittel-Forschung (**1960**), 10, 967-71
CODEN: ARZNAD; ISSN: 0004-4172
DT Journal
LA Unavailable
CC 11H (Biological Chemistry: **Pharmacology**)
AB Review of the mechanism of action of drugs with curarelike action. 68 references.

IT Curarelike substances
(biol. action of)
IT Hydrazine, 1-isonicotinoyl-2-[3-pyridylmethylene]-
Hydrazine, 1-nicotinoyl-2-[2-pyridylmethylene]-
Hydrazine, 1-nicotinoyl-2-[3-pyridylmethylene]-
Hydrazine, 1-nicotinoyl-2-[4-pyridylmethylene]-
Hydrazine, 1-picolinoyl-2-[2-pyridylmethylene]-
Hydrazine, 1-picolinoyl-2-[3-pyridylmethylene]-
Hydrazine, 1-picolinoyl-2-[4-pyridylmethylene]-
(effect on bacteria)
IT 54-92-2, Iproniazid 98-92-0, Nicotinamide
(bacterial response to)
IT 536-33-4, Isonicotinamide, 2-ethylthio- 840-78-8, Hydrazine, 1,2-dinicotinoyl- 840-79-9, Hydrazine, 1,2-dipicolinoyl- 1452-77-3, Picolinamide 1453-82-3, Isonicotinamide 2845-82-1, Δ2-1,3,4-Oxadiazolin-5-one, 2-[4-pyridyl]- 4329-75-3, Hydrazine, 1,2-diisonicotinoyl- 13025-99-5, Hydrazine, 1-isonicotinoyl-2-(4-pyridylmethylene)- **15017-32-0**, Hydrazine, 1-isonicotinoyl-2-(2-pyridylmethylene)- 60838-24-6, Δ2-1,3,4-Oxadiazolin-5-one, 2-[2-pyridyl]- 61690-97-9, Δ2-1,3,4-Oxadiazolin-5-one, 2-[3-pyridyl]-
(effect on bacteria)
IT **15017-32-0**, Hydrazine, 1-isonicotinoyl-2-(2-pyridylmethylene)-
(effect on bacteria)
RN 15017-32-0 HCAPLUS
CN 4-Pyridinecarboxylic acid, (2-pyridinylmethylene)hydrazide (9CI) (CA INDEX NAME)



L52 ANSWER 22 OF 25 HCAPLUS COPYRIGHT 2005 ACS on STN
AN 1961:44633 HCAPLUS
DN 55:44633
OREF 55:8659a-b
ED Entered STN: 22 Apr 2001
TI Chemical structure and antibacterial activity of isoniazid analogs
AU Kakimoto, Shichiro; Kruger-Thiemer, Ekkehard; Wempe, Ellen
CS Hokkaido Univ., Sapporo
SO Arzneimittel-Forschung (**1960**), 10, 963-7
CODEN: ARZNAD; ISSN: 0004-4172
DT Journal
LA Unavailable
CC 11H (Biological Chemistry: **Pharmacology**)
AB A number of isomeric hydrazides, thio amides, thiosemicarbazones, and similar derivs. of pyridinecarboxylic acids were tested on Mycobacterium tuberculosis, M. bovis, and M. smegmatis. The most active compds. were carbohydrazide derivs. attached in 4-position of the pyridine nucleus. Cross resistance developed in compds. capable of liberating isoniazid in the organism.
IT Molecular structure
(of isoniazid analogs, bactericidal action and)
IT Mycobacterium bovis
(smegmatis and tuberculosis, isoniazid analog effect on)
IT 2-Furoic acid, hydrazide, Co complex
Acetic acid, [p-cumenylthio]-, hydrazide
Hydrazine, 1-isonicotinoyl-2-[3-pyridylmethylene]-

Hydrazine, 1-nicotinoyl-2-[2-pyridylmethylene]-
Hydrazine, 1-nicotinoyl-2-[3-pyridylmethylene]-
Hydrazine, 1-nicotinoyl-2-[4-pyridylmethylene]-
Hydrazine, 1-picolinoyl-2-[2-pyridylmethylene]-
Hydrazine, 1-picolinoyl-2-[3-pyridylmethylene]-
Hydrazine, 1-picolinoyl-2-[4-pyridylmethylene]-
Isonicotinic acid, 2-ethyl-, hydrazide
Isonicotinic acid, 2-methyl-, hydrazide
(effect on bacteria)

IT 553-53-7, Nicotinic acid, hydrazide
(and hydrazides, effect on bacteria)

IT 54-85-3, Isoniazid
(and related compds., effect on bacteria)

IT 936-02-7, Salicylic acid, hydrazide
(bacteria and)

IT 54-92-2, Iproniazid 98-92-0, Nicotinamide
(bacterial response to)

IT 500-22-1, Nicotinaldehyde 872-85-5, Isonicotinaldehyde 1121-60-4, Picolinaldehyde
(derivs., effect on bacteria)

IT 122-85-0, Acetanilide, 4'-formyl-
(determination of, Mycobacterium response to)

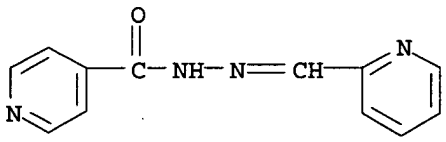
IT 98-98-6, Picolinic acid 536-33-4, Isonicotinamide, 2-ethylthio- 613-94-5, Benzoic acid, hydrazide 840-78-8, Hydrazine, 1,2-dinicotinoyl- 840-79-9, Hydrazine, 1,2-dipicolinoyl- 937-39-3, Acetic acid, phenyl-, hydrazide 1452-63-7, Picolinic acid, hydrazide 1452-77-3, Picolinamide 1453-82-3, Isonicotinamide 1904-58-1, Anthranilic acid, hydrazide 2196-13-6, Isonicotinamide, thio- 2361-27-5, 2-Thiophenecarboxylic acid, hydrazide 2845-82-1, Δ2-1,3,4-Oxadiazolin-5-one, 2-[4-pyridyl]- 3538-69-0, Cinnamic acid, hydrazide 4329-75-3, Hydrazine, 1,2-diisonicotinoyl- 4621-66-3, Nicotinamide, thio- 5346-38-3, Picolinamide, thio- 13025-99-5, Hydrazine, 1-isonicotinoyl-2-(4-pyridylmethylene)- **15017-32-0**, Hydrazine, 1-isonicotinoyl-2-(2-pyridylmethylene)- 60838-24-6, Δ2-1,3,4-Oxadiazolin-5-one, 2-[2-pyridyl]- 61690-97-9, Δ2-1,3,4-Oxadiazolin-5-one, 2-[3-pyridyl]- 65978-86-1, Mucic acid, dihydrazide 69583-00-2, 4-Pyridineacetic acid, hydrazide 98488-11-0, 4-Pyridineacrylic acid, hydrazide 98594-24-2, 4-Pyridinepropionic acid, hydrazide 100714-47-4, 4-Pyridineacetic acid, α-benzyl-, hydrazide 100867-63-8, 4-Pyridineacetic acid, α-benzylidene-, hydrazide
(effect on bacteria)

IT 55-22-1, Isonicotinic acid
(effect on bacteria, hydrazides)

IT **15017-32-0**, Hydrazine, 1-isonicotinoyl-2-(2-pyridylmethylene)-
(effect on bacteria)

RN 15017-32-0 HCAPLUS

CN 4-Pyridinecarboxylic acid, (2-pyridinylmethylene)hydrazide (9CI) (CA INDEX NAME)



L52 ANSWER 23 OF 25 HCAPLUS COPYRIGHT 2005 ACS on STN

AN 1959:89526 HCAPLUS

DN 53:89526

OREF 53:16161g-h

ED Entered STN: 22 Apr 2001

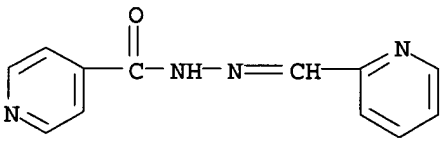
TI Pyridinealdehyde isonicotinoylhydrazone
IN Offe, Hans A.; Siefken, Werner; Domagk, Gerhard
PA Farbenfabriken Bayer Akt.-Ges.
DT **Patent**
LA Unavailable
NCL 12P; 1-01
CC 10G (Organic Chemistry: Heterocyclic Compounds)
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI DE 967974		19580102	DE	<--

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
DE 967974	NCL	12P

AB The title compound was prepared by the reaction of isonicotinic acid hydrazide (I) with pyridine-2-aldehyde (II) or -4-aldehyde (III). Thus, I 102 in EtOH 1100 was treated with II 75 parts to yield after 18 hrs. pyridine-2-aldehyde isonicotinoylhydrazone 139 parts, m. 190°. The 4-aldehyde isomer, prepared from I and III, in 124 parts yield, m. 216°.
IT Isonicotinaldehyde, isonicotinoylhydrazone
IT 55-22-1, Isonicotinic acid
(hydrazides)
IT 26445-06-7, Pyridinecarboxaldehyde
(isomers, derivs.)
IT 13025-99-5, Hydrazine, 1-isonicotinoyl-2-(4-pyridylmethylene)-
15017-32-0, Hydrazine, 1-isonicotinoyl-2-(2-pyridylmethylene)-
15017-32-0, Picolinaldehyde, isonicotinoylhydrazone
(preparation of)
IT **15017-32-0**, Hydrazine, 1-isonicotinoyl-2-(2-pyridylmethylene)-
(preparation of)
RN 15017-32-0 HCAPLUS
CN 4-Pyridinecarboxylic acid, (2-pyridinylmethylene)hydrazide (9CI) (CA INDEX NAME)



L52 ANSWER 24 OF 25 HCAPLUS COPYRIGHT 2005 ACS on STN
AN 1959:89525 HCAPLUS
DN 53:89525
OREF 53:16161e-g
ED Entered STN: 22 Apr 2001
TI Nicotinic acid and its esters
IN Heymons, Albrecht; Schnabel, Willy
PA Riedel-de Haen Akt.-Ges.
SO Addn. to Ger. 912, 212
DT **Patent**
LA Unavailable
NCL 12P; 1-01
CC 10G (Organic Chemistry: Heterocyclic Compounds)
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI DE 959278		19570307	DE	<--

CLASS

PATENT NO. CLASS PATENT FAMILY CLASSIFICATION CODES

DE 959278 NCL 12P

AB Heating quinoline with a fourfold amount of concentrated H2SO4 above 100°, treating the formed sulfuric acid solution several hrs. with a 5-8-fold amount of 50-70% HNO3 related to the original amount of quinoline at 220°, warming the mixture with lower mol. weight alkanols, such as MeOH, distilling the excess alkanol, neutralizing the H2SO4, taking up the formed ester in C6H6 and distilling the organic solution gives a 80% yield of alkyl nicotinate, e.g. Me nicotinate, m. 39°, b15 102-4°. The ester is converted into the free acid in the usual manner. The yields of this process are higher than those given in the main patent.

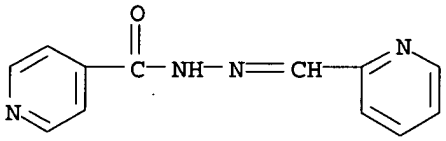
IT 59-67-6, Nicotinic acid
(and esters)

IT 13025-99-5, Hydrazine, 1-isonicotinoyl-2-(4-pyridylmethylene)-
15017-32-0, Hydrazine, 1-isonicotinoyl-2-(2-pyridylmethylene)-
(preparation of)

IT **15017-32-0**, Hydrazine, 1-isonicotinoyl-2-(2-pyridylmethylene)-
(preparation of)

RN 15017-32-0 HCAPLUS

CN 4-Pyridinecarboxylic acid, (2-pyridinylmethylene)hydrazide (9CI) (CA INDEX NAME)



L52 ANSWER 25 OF 25 HCAPLUS COPYRIGHT 2005 ACS on STN

AN 1956:36258 HCAPLUS

DN 50:36258

OREF 50:7147e-f

ED Entered STN: 22 Apr 2001

TI Hydrazones of heterocyclic aldehydes

PA Farbenfabriken Bayer A.-G.

DT **Patent**

LA Unavailable

CC 10 (Organic Chemistry)

FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI GB 729348		19550504	GB	<--

CLASS

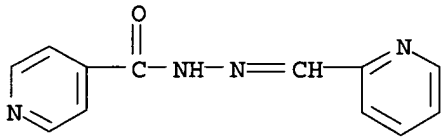
PATENT NO. CLASS PATENT FAMILY CLASSIFICATION CODES

GB 729348

AB The patent covers compds. useful in treatment of tuberculosis (as well as against other pathogenic bacteria), which have the general structure of piperonylidene or picolylidene derivs. of pyridinecarboxylic acids hydrazides. Thus, 69 g. nicotinic hydrazide refluxed with 75 g. piperonal in MeOH 3 h. gave 127 g. 2-piperonylidene-1-nicotinoylhydrazine, m. 199-200°. The isonicotinic analog m. 236° (from MeOH). Picolinaldehyde similarly gave 2-picolylidene-1-isonicotin-oylhydrazine, decompose 190°. 2-(4-Pyridylmethylene)-1-isonicotinoylhydrazine, m. 216°.

IT Heterocyclic compounds
(aldehydes, hydrazones of)

IT Tuberculosis
(antitubercular substances, hydrazones of heterocyclic aldehydes)
IT Aldehydes
(hydrazones of heterocyclic)
IT Hydrazones
(of heterocyclic aldehydes)
IT Hydrazine, 1-nicotinoyl-2-piperonylidene-
Nicotinic acid, piperonylidenehydrazide
Picolinaldehyde, isonicotinoylhydrazone
IT 2398-81-4, Nicotinic acid, 1-oxide 13602-12-5, Isonicotinic acid, 1-oxide
(derivs.)
IT 55-22-1, Isonicotinic acid
(hydrazides)
IT 120-57-0, Piperonal
(hydrazones)
IT 735-97-7, Hydrazine, 1-isonicotinoyl-2-piperonylidene- 13025-99-5, Hydrazine, 1-isonicotinoyl-2-[4-pyridylmethylene]- **15017-32-0**, Hydrazine, 1-isonicotinoyl-2-[2-pyridylmethylene]-
(preparation of)
IT **15017-32-0**, Hydrazine, 1-isonicotinoyl-2-[2-pyridylmethylene]-
(preparation of)
RN 15017-32-0 HCAPLUS
CN 4-Pyridinecarboxylic acid, (2-pyridinylmethylene)hydrazide (9CI) (CA INDEX NAME)



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FILE 'REGISTRY' ENTERED AT 11:36:06 ON 07 FEB 2005
USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.
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STRUCTURE FILE UPDATES: 6 FEB 2005 HIGHEST RN 826990-02-7
DICTIONARY FILE UPDATES: 6 FEB 2005 HIGHEST RN 826990-02-7

TSCA INFORMATION NOW CURRENT THROUGH MAY 21, 2004

Please note that search-term pricing does apply when conducting SmartSELECT searches.

Crossover limits have been increased. See HELP CROSSOVER for details.

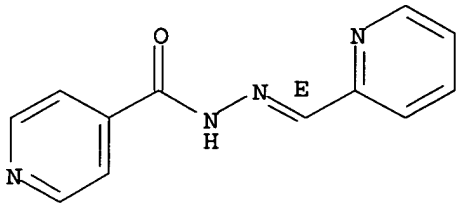
Experimental and calculated property data are now available. For more information enter HELP PROP at an arrow prompt in the file or refer to the file summary sheet on the web at:
http://www.cas.org/ONLINE/DBSS/registryss.html

=> => d ide can tot l28

L28 ANSWER 1 OF 12 REGISTRY COPYRIGHT 2005 ACS on STN

RN **329183-02-0** REGISTRY
CN 4-Pyridinecarboxylic acid, (2E)-(2-pyridinylmethylene)hydrazide, monohydrochloride (9CI) (CA INDEX NAME)
FS STEREOSEARCH
MF C12 H10 N4 O . Cl H
SR CA
LC STN Files: CA, CAPLUS
DT.CA CAplus document type: Patent
RL.P Roles from patents: BIOL (Biological study)
CRN (257299-41-5)

Double bond geometry as shown.



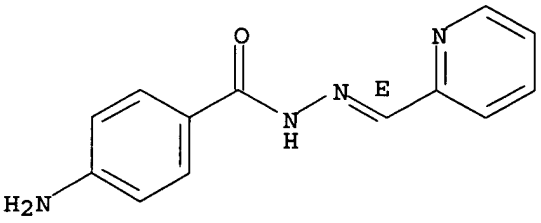
● HCl

1 REFERENCES IN FILE CA (1907 TO DATE)
1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 134:222632

L28 ANSWER 2 OF 12 REGISTRY COPYRIGHT 2005 ACS on STN
RN **329182-99-2** REGISTRY
CN Benzoic acid, 4-amino-, (2E)-(2-pyridinylmethylene)hydrazide, monohydrochloride (9CI) (CA INDEX NAME)
FS STEREOSEARCH
MF C13 H12 N4 O . Cl H
SR CA
LC STN Files: CA, CAPLUS
DT.CA CAplus document type: Patent
RL.P Roles from patents: BIOL (Biological study); PREP (Preparation); USES (Uses)
CRN (329182-98-1)

Double bond geometry as shown.



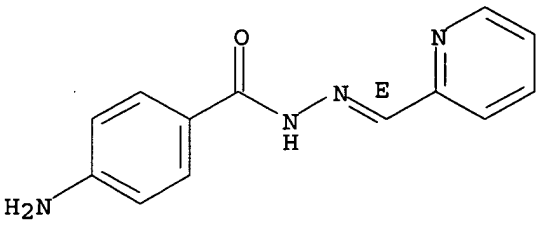
● HCl

1 REFERENCES IN FILE CA (1907 TO DATE)
1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 134:222632

L28 ANSWER 3 OF 12 REGISTRY COPYRIGHT 2005 ACS on STN
RN **329182-98-1** REGISTRY
CN Benzoic acid, 4-amino-, (2E)-(2-pyridinylmethylene)hydrazide (9CI) (CA INDEX NAME)
FS STEREOSEARCH
MF C13 H12 N4 O
CI COM
SR CA
LC STN Files: CA, CAPLUS, CHEMCATS
DT.CA CAplus document type: Patent
RL.P Roles from patents: BIOL (Biological study); PREP (Preparation); USES (Uses)

Double bond geometry as shown.



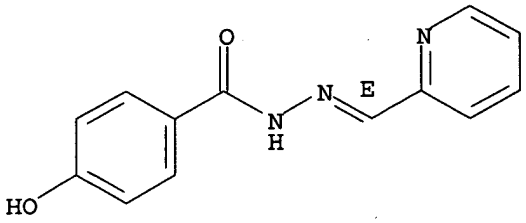
PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

1 REFERENCES IN FILE CA (1907 TO DATE)
1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 134:222632

L28 ANSWER 4 OF 12 REGISTRY COPYRIGHT 2005 ACS on STN
RN **329182-97-0** REGISTRY
CN Benzoic acid, 4-hydroxy-, (2E)-(2-pyridinylmethylene)hydrazide, monohydrochloride (9CI) (CA INDEX NAME)
FS STEREOSEARCH
MF C13 H11 N3 O2 . Cl H
SR CA
LC STN Files: CA, CAPLUS
DT.CA CAplus document type: Patent
RL.P Roles from patents: BIOL (Biological study); PREP (Preparation); USES (Uses)
CRN (329182-96-9)

Double bond geometry as shown.



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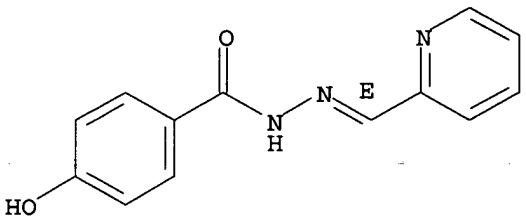
1 REFERENCES IN FILE CA (1907 TO DATE)
1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 134:222632

L28 ANSWER 5 OF 12 REGISTRY COPYRIGHT 2005 ACS on STN
RN **329182-96-9** REGISTRY
CN Benzoic acid, 4-hydroxy-, (2E)-(2-pyridinylmethylene)hydrazide (9CI) (CA INDEX NAME)
FS STEREOSEARCH
MF C13 H11 N3 O2
CI COM
SR CA
LC STN Files: CA, CAPLUS, CHEMCATS
DT.CA CAplus document type: Patent
RL.P Roles from patents: BIOL (Biological study); PREP (Preparation); USES (Uses)

Double bond geometry as shown.



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

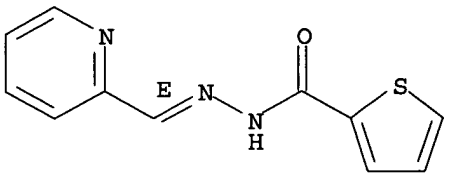
1 REFERENCES IN FILE CA (1907 TO DATE)
1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 134:222632

L28 ANSWER 6 OF 12 REGISTRY COPYRIGHT 2005 ACS on STN
RN **329182-95-8** REGISTRY
CN 2-Thiophenecarboxylic acid, (2E)-(2-pyridinylmethylene)hydrazide, monohydrochloride (9CI) (CA INDEX NAME)
FS STEREOSEARCH
MF C11 H9 N3 O S . Cl H
SR CA
LC STN Files: CA, CAPLUS
DT.CA CAplus document type: Patent
RL.P Roles from patents: BIOL (Biological study); PREP (Preparation); USES

(Uses)
CRN (270576-18-6)

Double bond geometry as shown.



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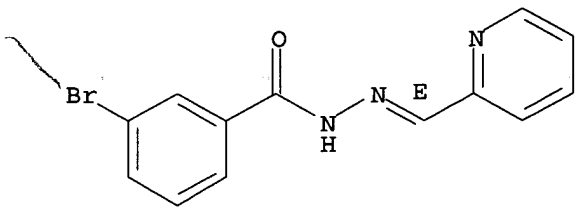
1 REFERENCES IN FILE CA (1907 TO DATE)
1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 134:222632

L28 ANSWER 7 OF 12 REGISTRY COPYRIGHT 2005 ACS on STN
RN **329182-94-7** REGISTRY
CN Benzoic acid, 3-bromo-, (2E)-(2-pyridinylmethylene)hydrazide, monohydrochloride (9CI) (CA INDEX NAME)
FS STEREOSEARCH
MF C13 H10 Br N3 O . Cl H
SR CA
LC STN Files: CA, CAPLUS
DT.CA CAplus document type: Patent
RL.P Roles from patents: BIOL (Biological study); PREP (Preparation); USES (Uses)
CRN (329182-93-6)

Double bond geometry as shown.



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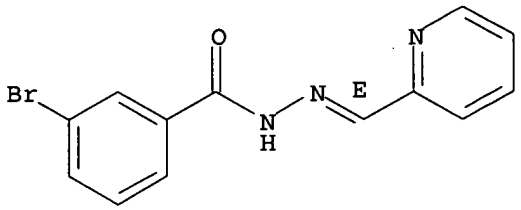
1 REFERENCES IN FILE CA (1907 TO DATE)
1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 134:222632

L28 ANSWER 8 OF 12 REGISTRY COPYRIGHT 2005 ACS on STN
RN **329182-93-6** REGISTRY
CN Benzoic acid, 3-bromo-, (2E)-(2-pyridinylmethylene)hydrazide (9CI) (CA INDEX NAME)
FS STEREOSEARCH
MF C13 H10 Br N3 O

CI COM
SR CA
LC STN Files: CA, CAPLUS, CHEMCATS
DT.CA CAplus document type: Patent
RL.P Roles from patents: BIOL (Biological study); PREP (Preparation); USES (Uses)

Double bond geometry as shown.



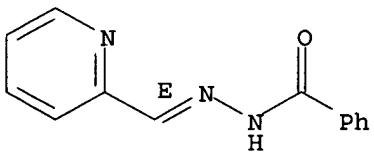
PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

1 REFERENCES IN FILE CA (1907 TO DATE)
1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 134:222632

L28 ANSWER 9 OF 12 REGISTRY COPYRIGHT 2005 ACS on STN
RN **329182-92-5** REGISTRY
CN Benzoic acid, (2E)-(2-pyridinylmethylene)hydrazide, monohydrochloride (9CI) (CA INDEX NAME)
FS STEREOSEARCH
MF C13 H11 N3 O . Cl H
SR CA
LC STN Files: CA, CAPLUS
DT.CA CAplus document type: Patent
RL.P Roles from patents: BIOL (Biological study); PREP (Preparation); USES (Uses)
CRN (270576-10-8)

Double bond geometry as shown.



● HCl

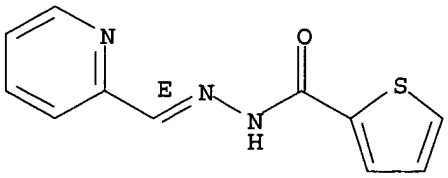
1 REFERENCES IN FILE CA (1907 TO DATE)
1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 134:222632

L28 ANSWER 10 OF 12 REGISTRY COPYRIGHT 2005 ACS on STN
RN **270576-18-6** REGISTRY
CN 2-Thiophenecarboxylic acid, (2E)-(2-pyridinylmethylene)hydrazide (9CI) (CA INDEX NAME)
FS STEREOSEARCH

MF C11 H9 N3 O S
CI COM
SR CA
LC STN Files: CA, CAPLUS, CASREACT, CHEMCATS
DT.CA CAplus document type: Journal; Patent
RL.P Roles from patents: BIOL (Biological study); PREP (Preparation); USES (Uses)
RL.NP Roles from non-patents: BIOL (Biological study); PREP (Preparation)

Double bond geometry as shown.



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

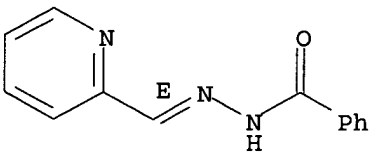
2 REFERENCES IN FILE CA (1907 TO DATE)
2 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 134:222632

REFERENCE 2: 133:256

L28 ANSWER 11 OF 12 REGISTRY COPYRIGHT 2005 ACS on STN
RN **270576-10-8** REGISTRY
CN Benzoic acid, (2E)-(2-pyridinylmethylene)hydrazide (9CI) (CA INDEX NAME)
FS STEREOSEARCH
MF C13 H11 N3 O
CI COM
SR CA
LC STN Files: CA, CAPLUS, CASREACT, CHEMCATS
DT.CA CAplus document type: Journal; Patent
RL.P Roles from patents: BIOL (Biological study); PREP (Preparation); USES (Uses)
RL.NP Roles from non-patents: BIOL (Biological study); PREP (Preparation)

Double bond geometry as shown.



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

2 REFERENCES IN FILE CA (1907 TO DATE)
2 REFERENCES IN FILE CAPLUS (1907 TO DATE)

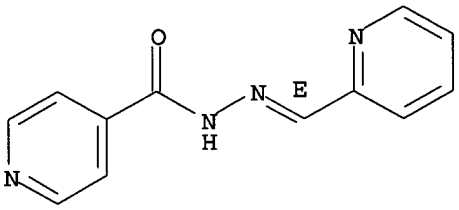
REFERENCE 1: 134:222632

REFERENCE 2: 133:256

L28 ANSWER 12 OF 12 REGISTRY COPYRIGHT 2005 ACS on STN

RN **257299-41-5** REGISTRY
CN 4-Pyridinecarboxylic acid, (2E)-(2-pyridinylmethylene)hydrazide, stereoisomer (9CI) (CA INDEX NAME)
FS STEREOSEARCH
MF C12 H10 N4 O
CI COM
SR CA
LC STN Files: CA, CAPLUS, CHEMCATS
DT.CA CAplus document type: Journal; Patent
RL.P Roles from patents: BIOL (Biological study)
RL.NP Roles from non-patents: BIOL (Biological study); PREP (Preparation); PRP (Properties)

Double bond geometry as shown.



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

3 REFERENCES IN FILE CA (1907 TO DATE)
3 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 134:222632

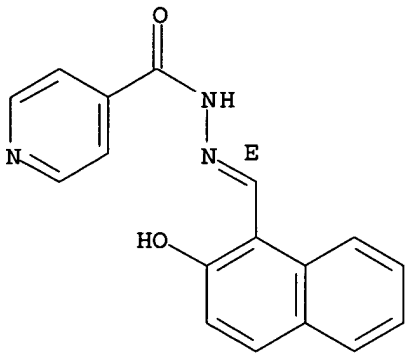
REFERENCE 2: 133:256

REFERENCE 3: 132:144676

=> d ide can tot l30

L30 ANSWER 1 OF 4 REGISTRY COPYRIGHT 2005 ACS on STN
RN **329183-01-9** REGISTRY
CN 4-Pyridinecarboxylic acid, (2E)-[(2-hydroxy-1-naphthalenyl)methylene]hydrazide (9CI) (CA INDEX NAME)
FS STEREOSEARCH
MF C17 H13 N3 O2
SR CA
LC STN Files: CA, CAPLUS, CHEMCATS
DT.CA CAplus document type: Patent
RL.P Roles from patents: BIOL (Biological study)

Double bond geometry as shown.



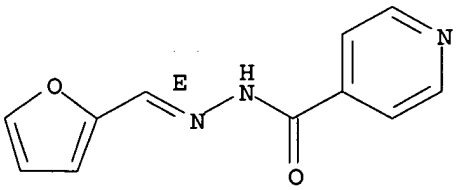
PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

1 REFERENCES IN FILE CA (1907 TO DATE)
1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 134:222632

L30 ANSWER 2 OF 4 REGISTRY COPYRIGHT 2005 ACS on STN
RN **329183-00-8** REGISTRY
CN 4-Pyridinecarboxylic acid, (2E)-(2-furanylmethylene)hydrazide, dihydrochloride (9CI) (CA INDEX NAME)
FS STEREOSEARCH
MF C11 H9 N3 O2 . 2 Cl H
SR CA
LC STN Files: CA, CAPLUS
DT.CA CAplus document type: Patent
RL.P Roles from patents: BIOL (Biological study); PREP (Preparation); USES (Uses)
CRN (213013-18-4)

Double bond geometry as shown.



●2 HCl

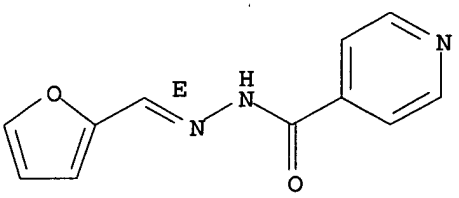
1 REFERENCES IN FILE CA (1907 TO DATE)
1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 134:222632

L30 ANSWER 3 OF 4 REGISTRY COPYRIGHT 2005 ACS on STN
RN **213013-18-4** REGISTRY
CN 4-Pyridinecarboxylic acid, (2E)-(2-furanylmethylene)hydrazide (9CI) (CA INDEX NAME)
FS STEREOSEARCH
MF C11 H9 N3 O2

CI COM
SR CA
LC STN Files: CA, CAPLUS, CHEMCATS
DT.CA CAplus document type: Journal; Patent
RL.P Roles from patents: BIOL (Biological study); PREP (Preparation); USES (Uses)
RL.NP Roles from non-patents: BIOL (Biological study); PRP (Properties)

Double bond geometry as shown.



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

4 REFERENCES IN FILE CA (1907 TO DATE)
4 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 134:222632

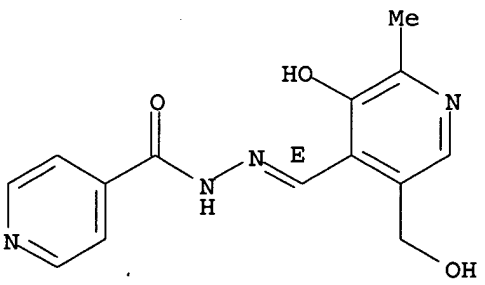
REFERENCE 2: 132:144676

REFERENCE 3: 130:281622

REFERENCE 4: 129:244728

L30 ANSWER 4 OF 4 REGISTRY COPYRIGHT 2005 ACS on STN
RN **83706-03-0** REGISTRY
CN 4-Pyridinecarboxylic acid, (2E)-[[3-hydroxy-5-(hydroxymethyl)-2-methyl-4-pyridinyl]methylene]hydrazide (9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN 4-Pyridinecarboxylic acid, [[3-hydroxy-5-(hydroxymethyl)-2-methyl-4-pyridinyl]methylene]hydrazide, (E)-
FS STEREOSEARCH
MF C14 H14 N4 O3
LC STN Files: BEILSTEIN*, CA, CAPLUS, CHEMCATS
(*File contains numerically searchable property data)
DT.CA CAplus document type: Journal; Patent
RL.P Roles from patents: BIOL (Biological study)
RL.NP Roles from non-patents: PREP (Preparation); RACT (Reactant or reagent)

Double bond geometry as shown.



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

2 REFERENCES IN FILE CA (1907 TO DATE)
2 REFERENCES IN FILE CAPLUS (1907 TO DATE)

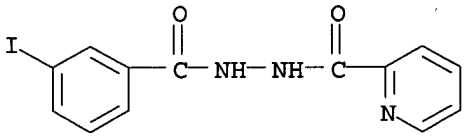
REFERENCE 1: 134:222632

REFERENCE 2: 98:53490

=> s l38 not l28,l30
L53 32 L38 NOT (L28 OR L30)

=> d ide can tot

L53 ANSWER 1 OF 32 REGISTRY COPYRIGHT 2005 ACS on STN
RN **453568-49-5** REGISTRY
CN 2-Pyridinecarboxylic acid, 2-(3-iodobenzoyl)hydrazide (9CI) (CA INDEX NAME)
OTHER NAMES:
CN N-Picolinoyl-N'-(3-iodobenzoyl)hydrazine
FS 3D CONCORD
MF C13 H10 I N3 O2
SR CA
LC STN Files: CA, CAPLUS, USPAT2, USPATFULL
DT.CA CAplus document type: Patent
RL.P Roles from patents: PREP (Preparation); RACT (Reactant or reagent)



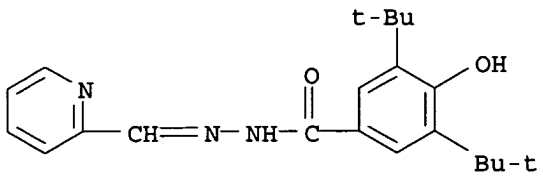
PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

2 REFERENCES IN FILE CA (1907 TO DATE)
2 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 138:255233

REFERENCE 2: 137:201315

L53 ANSWER 2 OF 32 REGISTRY COPYRIGHT 2005 ACS on STN
RN **223722-10-9** REGISTRY
CN Benzoic acid, 3,5-bis(1,1-dimethylethyl)-4-hydroxy-, (2-pyridinylmethylene)hydrazide (9CI) (CA INDEX NAME)
FS 3D CONCORD
MF C21 H27 N3 O2
SR CA
LC STN Files: CA, CAPLUS
DT.CA CAplus document type: Patent
RL.P Roles from patents: BIOL (Biological study); PREP (Preparation); USES (Uses)

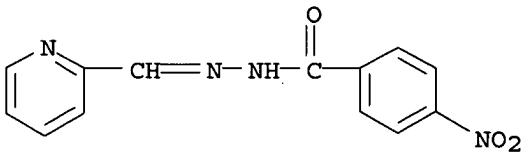


PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

1 REFERENCES IN FILE CA (1907 TO DATE)
1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 130:325088

L53 ANSWER 3 OF 32 REGISTRY COPYRIGHT 2005 ACS on STN
RN **158833-87-5** REGISTRY
CN Benzoic acid, 4-nitro-, (2-pyridinylmethylene)hydrazide (9CI) (CA INDEX NAME)
FS 3D CONCORD
MF C13 H10 N4 O3
SR CA
LC STN Files: CA, CAPLUS, CHEMCATS
DT.CA CAplus document type: Journal
RL.NP Roles from non-patents: PREP (Preparation); RACT (Reactant or reagent)
RLD.NP Roles for non-specific derivatives from non-patents: ANST (Analytical study)



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

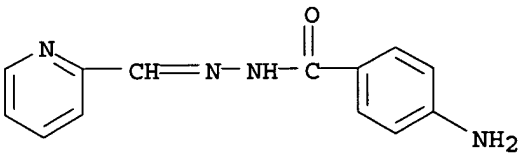
2 REFERENCES IN FILE CA (1907 TO DATE)
1 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
2 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 140:263066

REFERENCE 2: 121:270602

L53 ANSWER 4 OF 32 REGISTRY COPYRIGHT 2005 ACS on STN
RN **158833-86-4** REGISTRY
CN Benzoic acid, 4-amino-, (2-pyridinylmethylene)hydrazide (9CI) (CA INDEX NAME)
FS 3D CONCORD
MF C13 H12 N4 O
CI COM
SR CA
LC STN Files: CA, CAPLUS, CASREACT, CHEMCATS, TOXCENTER
DT.CA CAplus document type: Journal; Patent
RL.P Roles from patents: BIOL (Biological study); PRP (Properties); USES (Uses)
RL.NP Roles from non-patents: BIOL (Biological study); PREP (Preparation);

PROC (Process); PRP (Properties); RACT (Reactant or reagent); USES (Uses)
RLD.NP Roles for non-specific derivatives from non-patents: ANST (Analytical study)



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

8 REFERENCES IN FILE CA (1907 TO DATE)
1 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
8 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 142:125997

REFERENCE 2: 141:200220

REFERENCE 3: 139:126811

REFERENCE 4: 139:78658

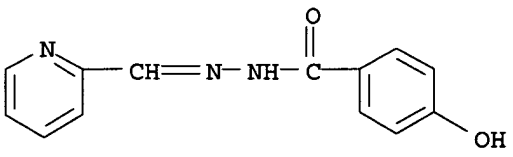
REFERENCE 5: 135:251853

REFERENCE 6: 132:246303

REFERENCE 7: 123:334700

REFERENCE 8: 121:270602

L53 ANSWER 5 OF 32 REGISTRY COPYRIGHT 2005 ACS on STN
RN **158833-85-3** REGISTRY
CN Benzoic acid, 4-hydroxy-, (2-pyridinylmethylene)hydrazide (9CI) (CA INDEX NAME)
FS 3D CONCORD
MF C13 H11 N3 O2
SR CA
LC STN Files: CA, CAPLUS, CASREACT, CHEMCATS, TOXCENTER
DT.CA CAplus document type: Journal; Patent
RL.P Roles from patents: BIOL (Biological study); PRP (Properties); USES (Uses)
RL.NP Roles from non-patents: BIOL (Biological study); PREP (Preparation); PRP (Properties); RACT (Reactant or reagent); USES (Uses)
RLD.NP Roles for non-specific derivatives from non-patents: ANST (Analytical study)



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

6 REFERENCES IN FILE CA (1907 TO DATE)
1 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
6 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 141:200220

REFERENCE 2: 139:78658

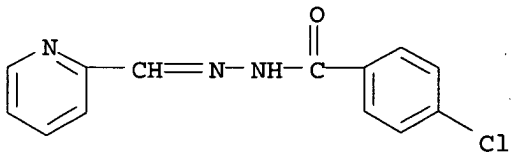
REFERENCE 3: 138:62068

REFERENCE 4: 135:251853

REFERENCE 5: 132:246303

REFERENCE 6: 121:270602

L53 ANSWER 6 OF 32 REGISTRY COPYRIGHT 2005 ACS on STN
RN **119259-99-3** REGISTRY
CN Benzoic acid, 4-chloro-, (2-pyridinylmethylene)hydrazide (9CI) (CA INDEX NAME)
FS 3D CONCORD
MF C13 H10 Cl N3 O
SR CA
LC STN Files: CA, CAPLUS, CASREACT, CHEMCATS, GMELIN*
(*File contains numerically searchable property data)
DT.CA CAplus document type: Journal
RL.NP Roles from non-patents: PREP (Preparation); PROC (Process); PRP (Properties); RACT (Reactant or reagent)



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

5 REFERENCES IN FILE CA (1907 TO DATE)
5 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 142:125997

REFERENCE 2: 140:263066

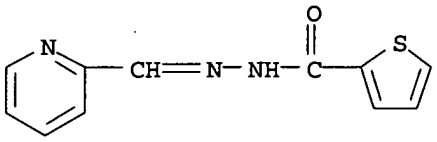
REFERENCE 3: 138:62068

REFERENCE 4: 137:162770

REFERENCE 5: 110:107066

L53 ANSWER 7 OF 32 REGISTRY COPYRIGHT 2005 ACS on STN
RN **114011-30-2** REGISTRY
CN 2-Thiophenecarboxylic acid, (2-pyridinylmethylene)hydrazide (9CI) (CA INDEX NAME)
OTHER NAMES:
CN 2-Pyridylaldehyde 2-thenoylhydrazone
FS 3D CONCORD
MF C11 H9 N3 O S

SR CA
LC STN Files: CA, CAPLUS, CASREACT, CHEMCATS, TOXCENTER
DT.CA CAplus document type: Journal; Patent
RL.P Roles from patents: BIOL (Biological study); PRP (Properties); USES (Uses)
RL.NP Roles from non-patents: BIOL (Biological study); PREP (Preparation); PRP (Properties); USES (Uses)



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

7 REFERENCES IN FILE CA (1907 TO DATE)
7 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 141:200220

REFERENCE 2: 139:255356

REFERENCE 3: 139:241979

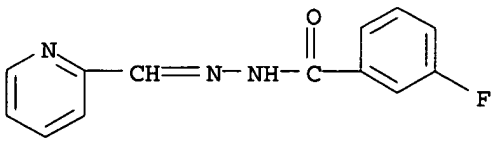
REFERENCE 4: 139:78658

REFERENCE 5: 135:251853

REFERENCE 6: 132:246303

REFERENCE 7: 108:197186

L53 ANSWER 8 OF 32 REGISTRY COPYRIGHT 2005 ACS on STN
RN **109372-67-0** REGISTRY
CN Benzoic acid, 3-fluoro-, (2-pyridinylmethylene)hydrazide (9CI) (CA INDEX NAME)
FS 3D CONCORD
MF C13 H10 F N3 O
SR CA
LC STN Files: CA, CAPLUS, CHEMCATS, USPATFULL
DT.CA CAplus document type: Patent
RL.P Roles from patents: BIOL (Biological study); PREP (Preparation); USES (Uses)

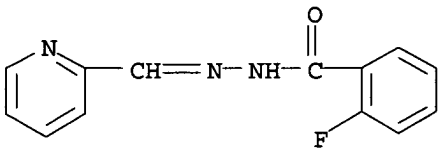


PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

1 REFERENCES IN FILE CA (1907 TO DATE)
1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 107:77634

L53 ANSWER 9 OF 32 REGISTRY COPYRIGHT 2005 ACS on STN
RN **109372-64-7** REGISTRY
CN Benzoic acid, 2-fluoro-, (2-pyridinylmethylene)hydrazide (9CI) (CA INDEX NAME)
FS 3D CONCORD
MF C13 H10 F N3 O
SR CA
LC STN Files: CA, CAPLUS, CHEMCATS, USPATFULL
DT.CA CAplus document type: Patent
RL.P Roles from patents: BIOL (Biological study); PREP (Preparation); USES (Uses)

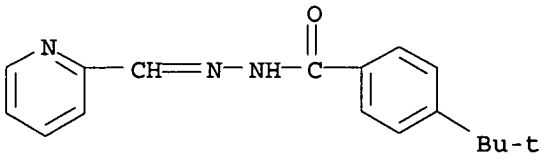


PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

1 REFERENCES IN FILE CA (1907 TO DATE)
1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 107:77634

L53 ANSWER 10 OF 32 REGISTRY COPYRIGHT 2005 ACS on STN
RN **109352-39-8** REGISTRY
CN Benzoic acid, 4-(1,1-dimethylethyl)-, (2-pyridinylmethylene)hydrazide (9CI) (CA INDEX NAME)
FS 3D CONCORD
MF C17 H19 N3 O
SR CA
LC STN Files: CA, CAPLUS, CHEMCATS, USPATFULL
DT.CA CAplus document type: Journal; Patent
RL.P Roles from patents: BIOL (Biological study); PREP (Preparation); USES (Uses)
RL.NP Roles from non-patents: RACT (Reactant or reagent)



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

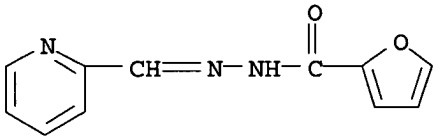
2 REFERENCES IN FILE CA (1907 TO DATE)
2 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 138:62068

REFERENCE 2: 107:77634

L53 ANSWER 11 OF 32 REGISTRY COPYRIGHT 2005 ACS on STN
RN **88053-38-7** REGISTRY

CN 2-Furancarboxylic acid, (2-pyridinylmethylene)hydrazide (9CI) (CA INDEX NAME)
FS 3D CONCORD
MF C11 H9 N3 O2
LC STN Files: CA, CAPLUS, CHEMCATS, TOXCENTER, USPATFULL
DT.CA CAplus document type: Journal; Patent
RL.P Roles from patents: BIOL (Biological study); PREP (Preparation); USES (Uses)
RL.NP Roles from non-patents: ANST (Analytical study); PREP (Preparation); PRP (Properties); USES (Uses)
RLD.NP Roles for non-specific derivatives from non-patents: PROC (Process); PRP (Properties)



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

6 REFERENCES IN FILE CA (1907 TO DATE)
2 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
6 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 142:32150

REFERENCE 2: 141:84058

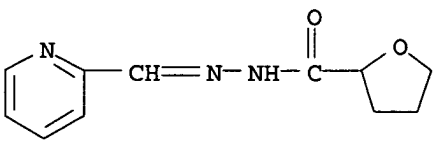
REFERENCE 3: 125:157099

REFERENCE 4: 107:77634

REFERENCE 5: 102:16682

REFERENCE 6: 100:2959

L53 ANSWER 12 OF 32 REGISTRY COPYRIGHT 2005 ACS on STN
RN **60943-77-3** REGISTRY
CN 2-Furancarboxylic acid, tetrahydro-, (2-pyridinylmethylene)hydrazide (9CI) (CA INDEX NAME)
OTHER NAMES:
CN NSC 204773
FS 3D CONCORD
MF C11 H13 N3 O2
LC STN Files: CA, CAPLUS, CHEMCATS, IFICDB, IFIPAT, IFIUDB
DT.CA CAplus document type: Patent
RL.P Roles from patents: BIOL (Biological study)

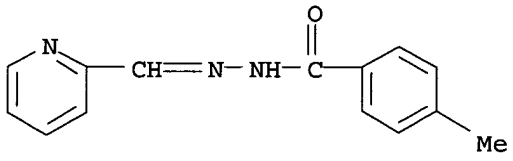


PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

1 REFERENCES IN FILE CA (1907 TO DATE)
1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 85:187788

L53 ANSWER 13 OF 32 REGISTRY COPYRIGHT 2005 ACS on STN
RN **58809-89-5** REGISTRY
CN Benzoic acid, 4-methyl-, (2-pyridinylmethylene)hydrazide (9CI) (CA INDEX NAME)
FS 3D CONCORD
MF C14 H13 N3 O
LC STN Files: BEILSTEIN*, CA, CAPLUS, CASREACT, CHEMCATS, SPECINFO, TOXCENTER, USPATFULL
(*File contains numerically searchable property data)
DT.CA CAplus document type: Journal; Patent
RL.P Roles from patents: BIOL (Biological study); PREP (Preparation); USES (Uses)
RL.NP Roles from non-patents: BIOL (Biological study); PREP (Preparation); RACT (Reactant or reagent)



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

6 REFERENCES IN FILE CA (1907 TO DATE)
6 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 140:263066

REFERENCE 2: 138:62068

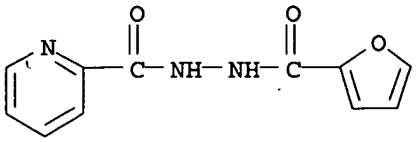
REFERENCE 3: 137:162770

REFERENCE 4: 135:250916

REFERENCE 5: 107:77634

REFERENCE 6: 85:190

L53 ANSWER 14 OF 32 REGISTRY COPYRIGHT 2005 ACS on STN
RN **56352-70-6** REGISTRY
CN 2-Pyridinecarboxylic acid, 2-(2-furanylcarbonyl)hydrazide (9CI) (CA INDEX NAME)
FS 3D CONCORD
MF C11 H9 N3 O3
LC STN Files: CA, CAPLUS, CHEMCATS, TOXCENTER
DT.CA CAplus document type: Journal
RL.NP Roles from non-patents: BIOL (Biological study); USES (Uses)

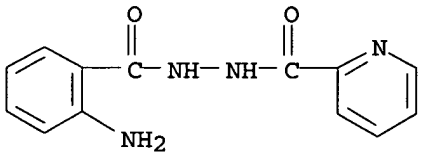


PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

1 REFERENCES IN FILE CA (1907 TO DATE)
1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 83:127290

L53 ANSWER 15 OF 32 REGISTRY COPYRIGHT 2005 ACS on STN
RN **54754-56-2** REGISTRY
CN 2-Pyridinecarboxylic acid, 2-(2-aminobenzoyl)hydrazide (9CI) (CA INDEX NAME)
FS 3D CONCORD
MF C13 H12 N4 O2
LC STN Files: BEILSTEIN*, CA, CAPLUS
(*File contains numerically searchable property data)
DT.CA CAplus document type: Journal
RL.NP Roles from non-patents: PREP (Preparation); RACT (Reactant or reagent)

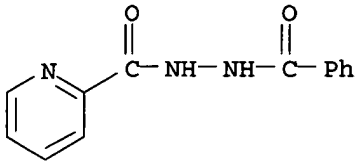


PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

1 REFERENCES IN FILE CA (1907 TO DATE)
1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 82:125383

L53 ANSWER 16 OF 32 REGISTRY COPYRIGHT 2005 ACS on STN
RN **54571-23-2** REGISTRY
CN 2-Pyridinecarboxylic acid, 2-benzoylhydrazide (9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN Hydrazine, 1-benzoyl-2-picolinoyl- (6CI)
OTHER NAMES:
CN NSC 90913
FS 3D CONCORD
MF C13 H11 N3 O2
LC STN Files: BEILSTEIN*, CA, CAOLD, CAPLUS, CASREACT, CHEMCATS, TOXCENTER
(*File contains numerically searchable property data)
DT.CA CAplus document type: Journal
RL.NP Roles from non-patents: BIOL (Biological study); PREP (Preparation); PRP (Properties); RACT (Reactant or reagent); USES (Uses); NORL (No role in record)



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

5 REFERENCES IN FILE CA (1907 TO DATE)
5 REFERENCES IN FILE CAPLUS (1907 TO DATE)
1 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

REFERENCE 1: 140:398813

REFERENCE 2: 140:263033

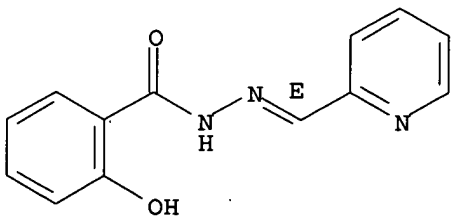
REFERENCE 3: 136:241580

REFERENCE 4: 82:132761

REFERENCE 5: 55:112136

L53 ANSWER 17 OF 32 REGISTRY COPYRIGHT 2005 ACS on STN
RN **53584-52-4** REGISTRY
CN Benzoic acid, 2-hydroxy-, (2-pyridinylmethylene)hydrazide, (E)- (9CI) (CA INDEX NAME)
OTHER NAMES:
CN N-Picolinylidene-N'-salicyloylhydrazine
FS STEREOSEARCH
MF C13 H11 N3 O2
LC STN Files: BEILSTEIN*, CA, CAPLUS, CHEMCATS, GMELIN*
(*File contains numerically searchable property data)
DT.CA CAplus document type: Journal
RL.NP Roles from non-patents: PRP (Properties)
RLD.NP Roles for non-specific derivatives from non-patents: PRP (Properties)

Double bond geometry as shown.



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

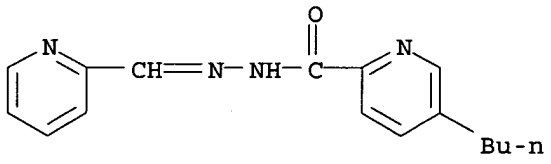
3 REFERENCES IN FILE CA (1907 TO DATE)
1 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
3 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 91:107543

REFERENCE 2: 88:68437

REFERENCE 3: 81:128080

L53 ANSWER 18 OF 32 REGISTRY COPYRIGHT 2005 ACS on STN
RN **31004-94-1** REGISTRY
CN Picolinic acid, 5-butyl-, (2-pyridylmethylene)hydrazide (8CI) (CA INDEX NAME)
OTHER NAMES:
CN 1-Fusarinyl-2-picolinylidenehydrazine
FS 3D CONCORD
MF C16 H18 N4 O
LC STN Files: BEILSTEIN*, CA, CAPLUS
(*File contains numerically searchable property data)
DT.CA CAplus document type: Journal
RL.NP Roles from non-patents: PREP (Preparation)

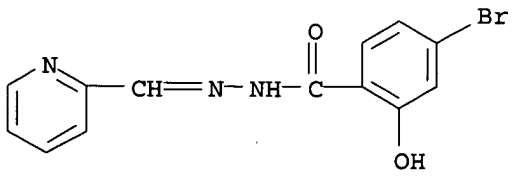


PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

1 REFERENCES IN FILE CA (1907 TO DATE)
1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 74:29239

L53 ANSWER 19 OF 32 REGISTRY COPYRIGHT 2005 ACS on STN
RN **25350-75-8** REGISTRY
CN Benzoic acid, 4-bromo-2-hydroxy-, (2-pyridinylmethylene)hydrazide (9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN Salicylic acid, 4-bromo-, (2-pyridylmethylene)hydrazide (8CI)
FS 3D CONCORD
MF C13 H10 Br N3 O2
LC STN Files: BEILSTEIN*, CA, CAPLUS
(*File contains numerically searchable property data)
DT.CA CAplus document type: Journal
RL.NP Roles from non-patents: PREP (Preparation)



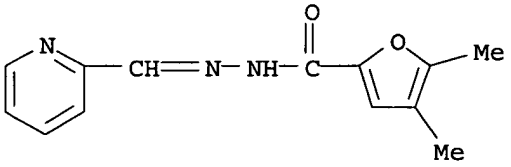
PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

1 REFERENCES IN FILE CA (1907 TO DATE)
1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 72:110952

L53 ANSWER 20 OF 32 REGISTRY COPYRIGHT 2005 ACS on STN

RN **20842-36-8** REGISTRY
CN 2-Furoic acid, 4,5-dimethyl-, (2-pyridylmethylene)hydrazide (8CI) (CA INDEX NAME)
FS 3D CONCORD
MF C13 H13 N3 O2
LC STN Files: BEILSTEIN*, CA, CAPLUS
(*File contains numerically searchable property data)
DT.CA CAplus document type: Journal
RL.NP Roles from non-patents: PREP (Preparation)

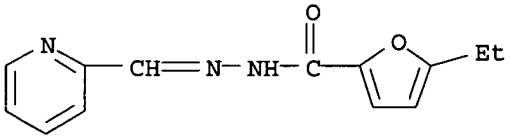


PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

1 REFERENCES IN FILE CA (1907 TO DATE)
1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 70:11530

L53 ANSWER 21 OF 32 REGISTRY COPYRIGHT 2005 ACS on STN
RN **20842-27-7** REGISTRY
CN 2-Furoic acid, 5-ethyl-, (2-pyridylmethylene)hydrazide (8CI) (CA INDEX NAME)
FS 3D CONCORD
MF C13 H13 N3 O2
LC STN Files: BEILSTEIN*, CA, CAPLUS
(*File contains numerically searchable property data)
DT.CA CAplus document type: Journal
RL.NP Roles from non-patents: PREP (Preparation)



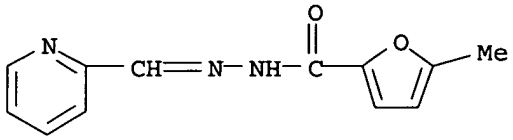
PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

1 REFERENCES IN FILE CA (1907 TO DATE)
1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 70:11530

L53 ANSWER 22 OF 32 REGISTRY COPYRIGHT 2005 ACS on STN
RN **20842-24-4** REGISTRY
CN 2-Furoic acid, 5-methyl-, (2-pyridylmethylene)hydrazide (8CI) (CA INDEX NAME)
FS 3D CONCORD
MF C12 H11 N3 O2
LC STN Files: BEILSTEIN*, CA, CAPLUS, CHEMCATS
(*File contains numerically searchable property data)
DT.CA CAplus document type: Journal

RL.NP Roles from non-patents: PREP (Preparation)

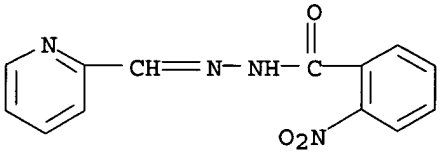


PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

1 REFERENCES IN FILE CA (1907 TO DATE)
1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 70:11530

L53 ANSWER 23 OF 32 REGISTRY COPYRIGHT 2005 ACS on STN
RN **19011-96-2** REGISTRY
CN Benzoic acid, o-nitro-, (2-pyridylmethylene)hydrazide (8CI) (CA INDEX NAME)
FS 3D CONCORD
MF C13 H10 N4 O3
LC STN Files: BEILSTEIN*, CA, CAPLUS, CHEMCATS
(*File contains numerically searchable property data)
DT.CA CAplus document type: Journal
RL.NP Roles from non-patents: PREP (Preparation)

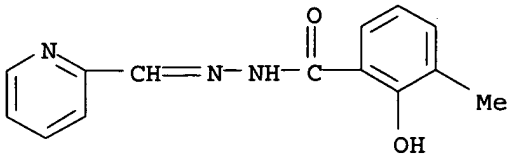


PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

1 REFERENCES IN FILE CA (1907 TO DATE)
1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 69:27401

L53 ANSWER 24 OF 32 REGISTRY COPYRIGHT 2005 ACS on STN
RN **18176-42-6** REGISTRY
CN 2,3-Cresotic acid, (2-pyridylmethylene)hydrazide (8CI) (CA INDEX NAME)
FS 3D CONCORD
MF C14 H13 N3 O2
LC STN Files: BEILSTEIN*, CA, CAPLUS, CHEMCATS
(*File contains numerically searchable property data)
DT.CA CAplus document type: Journal
RL.NP Roles from non-patents: PREP (Preparation)

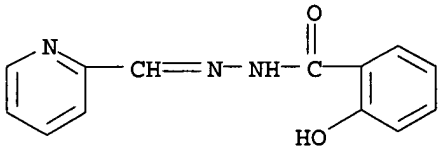


PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

1 REFERENCES IN FILE CA (1907 TO DATE)
1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 68:104686

L53 ANSWER 25 OF 32 REGISTRY COPYRIGHT 2005 ACS on STN
RN **18176-38-0** REGISTRY
CN Benzoic acid, 2-hydroxy-, (2-pyridinylmethylene)hydrazide (9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN Salicylic acid, (2-pyridylmethylene)hydrazide (6CI, 8CI)
OTHER NAMES:
CN Pyridine-2-aldehyde salicyloylhydrazone
CN Pyridine-2-carboxaldehyde 2'-hydroxybenzoylhydrazone
FS 3D CONCORD
MF C13 H11 N3 O2
LC STN Files: BEILSTEIN*, CA, CAOLD, CAPLUS, CHEMCATS, GMELIN*, TOXCENTER
(*File contains numerically searchable property data)
DT.CA CAplus document type: Journal
RL.NP Roles from non-patents: ANST (Analytical study); BIOL (Biological study); PREP (Preparation); PRP (Properties); RACT (Reactant or reagent); USES (Uses); NORL (No role in record)
RLD.NP Roles for non-specific derivatives from non-patents: PRP (Properties)



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

13 REFERENCES IN FILE CA (1907 TO DATE)
2 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
13 REFERENCES IN FILE CAPLUS (1907 TO DATE)
1 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

REFERENCE 1: 135:55079

REFERENCE 2: 132:202643

REFERENCE 3: 110:107066

REFERENCE 4: 98:136771

REFERENCE 5: 97:155494

REFERENCE 6: 91:203722

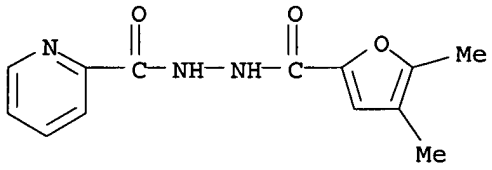
REFERENCE 7: 90:214705

REFERENCE 8: 90:33454

REFERENCE 9: 88:15209

REFERENCE 10: 83:68374

L53 ANSWER 26 OF 32 REGISTRY COPYRIGHT 2005 ACS on STN
RN **15033-15-5** REGISTRY
CN Hydrazine, 1-(4,5-dimethyl-2-furoyl)-2-picolinoyl- (8CI) (CA INDEX NAME)
FS 3D CONCORD
MF C13 H13 N3 O3
LC STN Files: BEILSTEIN*, CA, CAPLUS
(*File contains numerically searchable property data)
DT.CA CAplus document type: Journal
RL.NP Roles from non-patents: PREP (Preparation)

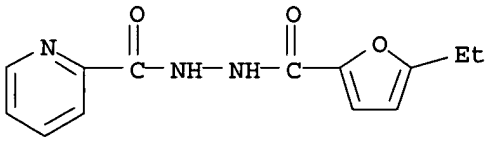


PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

1 REFERENCES IN FILE CA (1907 TO DATE)
1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 67:53943

L53 ANSWER 27 OF 32 REGISTRY COPYRIGHT 2005 ACS on STN
RN **15033-00-8** REGISTRY
CN Hydrazine, 1-(5-ethyl-2-furoyl)-2-picolinoyl- (8CI) (CA INDEX NAME)
FS 3D CONCORD
MF C13 H13 N3 O3
LC STN Files: BEILSTEIN*, CA, CAPLUS
(*File contains numerically searchable property data)
DT.CA CAplus document type: Journal
RL.NP Roles from non-patents: PREP (Preparation)



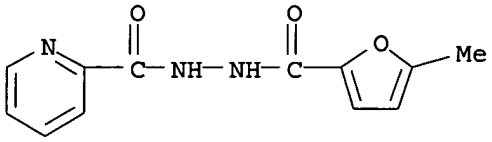
PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

1 REFERENCES IN FILE CA (1907 TO DATE)
1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 67:53943

L53 ANSWER 28 OF 32 REGISTRY COPYRIGHT 2005 ACS on STN

RN **15032-97-0** REGISTRY
CN Hydrazine, 1-(5-methyl-2-furoyl)-2-picolinoyl- (8CI) (CA INDEX NAME)
FS 3D CONCORD
MF C12 H11 N3 O3
LC STN Files: BEILSTEIN*, CA, CAPLUS
(*File contains numerically searchable property data)
DT.CA CAplus document type: Journal
RL.NP Roles from non-patents: PREP (Preparation)

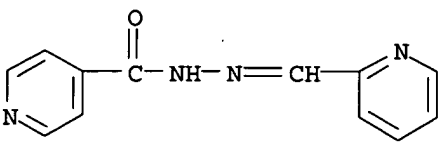


PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

1 REFERENCES IN FILE CA (1907 TO DATE)
1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 67:53943

L53 ANSWER 29 OF 32 REGISTRY COPYRIGHT 2005 ACS on STN
RN **15017-32-0** REGISTRY
CN 4-Pyridinecarboxylic acid, (2-pyridinylmethylene)hydrazide (9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN Hydrazine, 1-isonicotinoyl-2-(2-pyridylmethylene)- (6CI)
CN Isonicotinic acid, (2-pyridylmethylene)hydrazide (6CI, 7CI, 8CI)
OTHER NAMES:
CN 2-Pyridinealdehyde isonicotinoylhydrazone
CN 2-Pyridinecarboxaldehyde isonicotinoyl hydrazone
CN 2-Pyridylcarboxaldehyde isonicotinoyl hydrazone
CN NSC 690252
CN NSC 76233
FS 3D CONCORD
MF C12 H10 N4 O
CI COM
LC STN Files: BEILSTEIN*, CA, CAOLD, CAPLUS, CASREACT, CHEMCATS, GMELIN*, SPECINFO, TOXCENTER, USPATFULL
(*File contains numerically searchable property data)
DT.CA CAplus document type: Conference; Journal; Patent
RL.P Roles from patents: BIOL (Biological study); PREP (Preparation); PRP (Properties); USES (Uses); NORL (No role in record)
RL.NP Roles from non-patents: ANST (Analytical study); BIOL (Biological study); PREP (Preparation); PRP (Properties); RACT (Reactant or reagent); USES (Uses); NORL (No role in record)
RLD.NP Roles for non-specific derivatives from non-patents: BIOL (Biological study); PREP (Preparation); PRP (Properties); RACT (Reactant or reagent); USES (Uses)



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

31 REFERENCES IN FILE CA (1907 TO DATE)
3 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
32 REFERENCES IN FILE CAPLUS (1907 TO DATE)
2 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

REFERENCE 1: 142:47951

REFERENCE 2: 141:235862

REFERENCE 3: 141:200220

REFERENCE 4: 139:255356

REFERENCE 5: 139:241979

REFERENCE 6: 139:190384

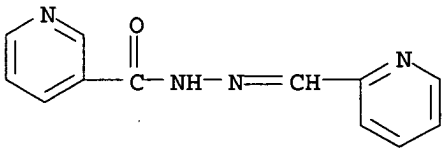
REFERENCE 7: 139:126811

REFERENCE 8: 139:78658

REFERENCE 9: 136:241580

REFERENCE 10: 135:251853

L53 ANSWER 30 OF 32 REGISTRY COPYRIGHT 2005 ACS on STN
RN **15017-27-3** REGISTRY
CN 3-Pyridinecarboxylic acid, (2-pyridinylmethylene)hydrazide (9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN Nicotinic acid, (2-pyridylmethylene)hydrazide (6CI, 7CI, 8CI)
OTHER NAMES:
CN Picolinaldehyde nicotinoylhydrazone
FS 3D CONCORD
MF C12 H10 N4 O
LC STN Files: BEILSTEIN*, CA, CAOLD, CAPLUS, CHEMCATS, SPECINFO, TOXCENTER
(*File contains numerically searchable property data)
DT.CA CAplus document type: Journal
RL.NP Roles from non-patents: ANST (Analytical study); PREP (Preparation); RACT (Reactant or reagent); USES (Uses); NORL (No role in record)



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

8 REFERENCES IN FILE CA (1907 TO DATE)
8 REFERENCES IN FILE CAPLUS (1907 TO DATE)
3 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

REFERENCE 1: 136:128270

REFERENCE 2: 135:127341

REFERENCE 3: 135:40101

REFERENCE 4: 104:14187

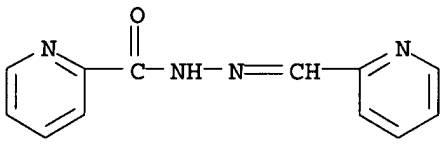
REFERENCE 5: 94:10656

REFERENCE 6: 70:11530

REFERENCE 7: 66:98544

REFERENCE 8: 57:78313

L53 ANSWER 31 OF 32 REGISTRY COPYRIGHT 2005 ACS on STN
RN **15017-24-0** REGISTRY
CN 2-Pyridinecarboxylic acid, (2-pyridinylmethylene)hydrazide (9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN Picolinic acid, (2-pyridylmethylene)hydrazide (6CI, 7CI, 8CI)
OTHER NAMES:
CN 2-Pyridinecarboxaldehyde picolinoylhydrazone
CN 2-Pyridinecarboxylic acid, (2-pyridylmethylene)hydrazide
CN NSC 106460
FS 3D CONCORD
MF C12 H10 N4 O
LC STN Files: BEILSTEIN*, CA, CAOLD, CAPLUS, CHEMCATS, SPECINFO, TOXCENTER
(*File contains numerically searchable property data)
DT.CA CAplus document type: Journal
RL.NP Roles from non-patents: ANST (Analytical study); BIOL (Biological study); PREP (Preparation); PRP (Properties); RACT (Reactant or reagent); USES (Uses); NORL (No role in record)



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

8 REFERENCES IN FILE CA (1907 TO DATE)
8 REFERENCES IN FILE CAPLUS (1907 TO DATE)
3 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

REFERENCE 1: 142:47951

REFERENCE 2: 135:28375

REFERENCE 3: 82:132761

REFERENCE 4: 81:114015

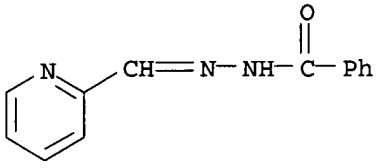
REFERENCE 5: 70:11530

REFERENCE 6: 66:98544

REFERENCE 7: 57:78313

REFERENCE 8: 54:16987

L53 ANSWER 32 OF 32 REGISTRY COPYRIGHT 2005 ACS on STN
RN **1215-55-0** REGISTRY
CN Benzoic acid, (2-pyridinylmethylene)hydrazide (9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN Benzoic acid, (2-pyridylmethylene)hydrazide (7CI, 8CI)
OTHER NAMES:
CN 2-Formylpyridine benzoylhydrazone
CN NSC 609221
CN Pyridine-2-carboxaldehyde benzoylhydrazone
FS 3D CONCORD
MF C13 H11 N3 O
LC STN Files: BEILSTEIN*, BIOSIS, CA, CAOLD, CAPLUS, CASREACT, CHEMCATS, GMELIN*, TOXCENTER, USPATFULL
(*File contains numerically searchable property data)
DT.CA CAplus document type: Conference; Journal; Patent
RL.P Roles from patents: BIOL (Biological study); PREP (Preparation); PRP (Properties); RACT (Reactant or reagent); USES (Uses)
RL.NP Roles from non-patents: ANST (Analytical study); BIOL (Biological study); PREP (Preparation); PROC (Process); PRP (Properties); RACT (Reactant or reagent); USES (Uses); NORL (No role in record)



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

28 REFERENCES IN FILE CA (1907 TO DATE)
28 REFERENCES IN FILE CAPLUS (1907 TO DATE)
1 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

REFERENCE 1: 142:125997

REFERENCE 2: 141:200220

REFERENCE 3: 140:263066

REFERENCE 4: 139:255356

REFERENCE 5: 139:241979

REFERENCE 6: 139:78658

REFERENCE 7: 138:62068

REFERENCE 8: 137:319630

REFERENCE 9: 137:162770

REFERENCE 10: 136:241580

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